Essex Minerals Local Plan

Adopted July 2014

Essex County Council

Foreword

According to the British Geological Society, on average each person in the UK uses more than ten tonnes of minerals and metals in one year (the same weight as seven cars). This figure includes minerals products you use at home and a share of minerals, metals and fuels used in leisure, retail, transport, work and public facilities.

Because minerals are so important to our economy and quality of life, the Government requires us to ensure there are enough reserves to meet the needs of construction and other industries.

In Essex the main minerals we produce are sand and gravel (aggregates). However, the extraction of minerals can have impacts on the landscape, environment and the quality of life of local residents. Such impacts are to be minimised through the use of planning policies, contained in this document, for the supply of minerals.

The MLP provides up-to-date planning policy for minerals development in Essex until 2029. In particular, it gives certainty as to the location of future minerals development i.e., through site allocations.

Landowners and mineral companies with preferred or reserve sites in this Plan will need to come forward with applications for planning permission setting out how impacts will be addressed, e.g., through Environmental Impact Assessments. The Plan includes details of how mineral sites should be restored and reused allowing us to keep the balance between the demand for minerals against the need to protect the environment and quality of life. We're challenging site promoters, in particular, to promote habitat creation as an after-use.

Throughout its preparation the MLP has been shaped by comments from stakeholders and the public of Essex through a series of public consultations, alongside evidence of how Essex is changing and how growth can be supported.

The adoption of this Plan represents a milestone in providing Essex with the framework it needs to ensure a steady supply of aggregate, supporting alternative sources of supply and managing mineral development within acceptable social and environmental limits.

Councillor John Jowers
Cabinet Member for Libraries, Communities & Planning

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1.0 Introduction

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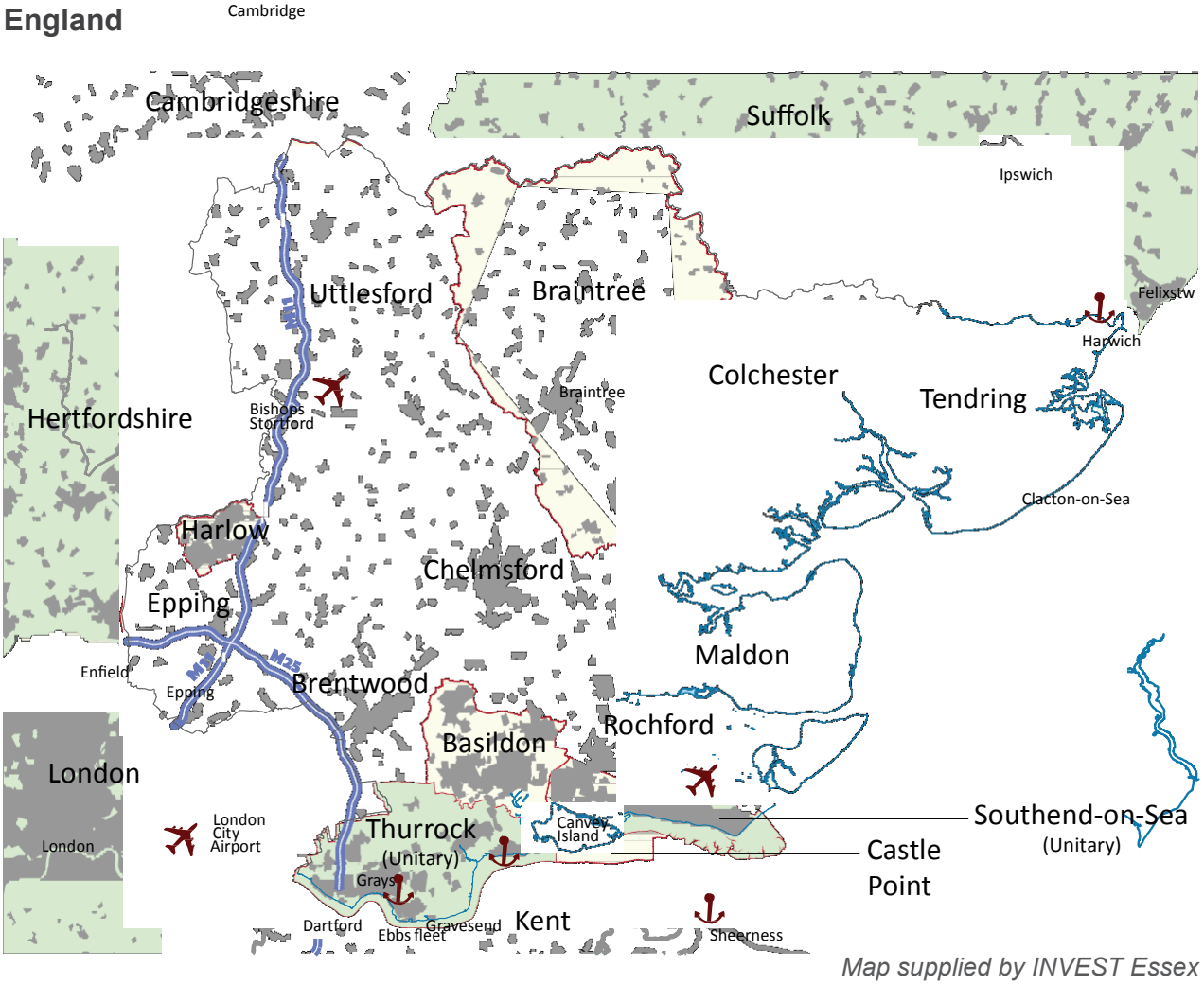
Background

1.1 Essex County Council is the minerals and waste planning authority for the County of Essex, as defined in Map 1.

Map 1 Essex Administrative Area and Mineral Planning Authorities in the East of England



Map supplied by INVEST Essex

1.2 The County Council has a statutory responsibility to plan for future minerals supply and waste management, and to determine mineral and waste planning applications. It is fulfilling this responsibility by preparing separate Minerals and Waste Local Plans to support the achievement of sustainable development within the County.

1.3 This document is the Essex Minerals Local Plan 2014, which has been found sound through an examination process subject to modifications (included). For the sake of brevity, the Essex Minerals Local Plan will be referred to as "the Plan" throughout the rest of the document.

The Economic Importance of Minerals

1.4 Minerals underpin our entire way of life. They provide the construction materials upon which we all rely for the homes we live in, our places of work, our transport infrastructure and essential services such as health, education and recreational facilities. They are essential to energy generation, agriculture, manufacturing and many other businesses. In short, we could not maintain our current way of life without them.

1.5 However, minerals are a finite natural resource and can only be worked - extracted from the ground - where they are found. It is vital we only extract what is needed and make best use of them to secure their long-term availability and conservation.

1.6 In monetary terms the value of all forms of on-shore minerals produced in the UK is about £3.5 billion a year, of which land-won sand and gravel represents about £630 million a year. This sector represents a valuable economic resource(1) ,and the community of Essex is well placed to benefit from its mineral assets; in particular sand and gravel, silica sand, chalk, brick clay and brickearth, with sand and gravel being the largest contributor.

1.7 An adequate and steady supply of minerals is essential both for the national economy and to support the County's economic growth, whether by enabling vital new development to take place, supporting key manufacturing processes, or ensuring the maintenance and improvement of our existing built and natural environment. This plan sets out how our future mineral needs will be met.

1.8 Once adopted, the Plan will comprise an important part of the 'Development Plan' in Essex, for it sets out how we will provide for our future mineral needs – through local planning policies and land allocations - and provides the basis on which future planning applications for minerals development will be considered and determined. This provides greater certainty for both local communities and the minerals industry as to where future minerals development might take place.

A Spatial Plan - A New Form Of Local Plan

1.9 This is a positive 'spatial plan' which aims to deliver sustainable development. The Plan has a central role in supporting economic growth in the County through the delivery of land, buildings and infrastructure to meet our future needs. At the same time it ensures positive steps are taken to protect and enhance the County's unique natural, historic and environmental assets and resources. It also has a key role to play in supporting the strong, vibrant and healthy communities in Essex to make them sustainable for the future.

(1) United Kingdom Yearbook 2011, British Geological Survey

1.10 The Plan provides a clear policy framework for all parties involved in future minerals and minerals related development as it provides a picture of how we see minerals development in the County taking place up to 2029, the steps needed to make this happen and the measures necessary to assess our progress on the way.

1.11 The Plan is founded on an extensive evidence base and has been prepared following widespread and ongoing public consultation through the 'Issues and Options' and 'Preferred Approach' plan production stages. It has been produced in parallel with a Sustainability Appraisal which has informed each step of plan development, enabling alternatives to be considered and appropriately evaluated. A 'Strategic Flood Risk Assessment' (SFRA) and 'Habitat Regulations Assessment' (HRA) have informed both the Sustainability Appraisal and this Plan.

1.12 The Plan is consistent with the County Council's Vision statement and Corporate Strategy, and with the Sustainable Community Strategies still active across Essex's District, Borough and City Councils. It is commensurate with local economic strategies developed across Essex, including the County Council's own Economic Growth Strategy, and is a critical component of Essex's suite of strategies which underpin the work of the South East Local Enterprise Partnership, including the aims and objectives of any relevant Enterprise Zone. Other forward planning documents of significance have also been considered during its preparation (including the Local Transport Plan, the Development Plans prepared by Essex District, Borough and City Councils and the Environment Agency's flood management plans).

1.13 The policies and proposals in the Plan are considered to be consistent with the National Planning Policy Framework (NPPF) published in March 2012. Particular regard has been paid to the NPPF's emphasis on supporting economic growth through the plan-led system and its presumption in favour of sustainable development.

The Minerals Supply Hierachy

1.14 The Plan's overarching strategic ambition is to deliver the mineral supply hierarchy in Essex. This aims firstly to reduce as far as practicable the quantity of mineral used and waste generated, then to use as much secondary and recycled mineral as possible, before finally securing the remainder of mineral needed through new primary extraction and safeguarding appropriate mineral facilities and resources. The rationale behind the minerals supply hierarchy has underpinned all plan preparation work undertaken since 2005, and continues to provide a coherent and sound foundation for this Plan.

The Plan Area

1.15 This Plan applies to the whole of the administrative County of Essex (see Map 1).

The Plan Period

1.16 The plan-period covers 18 years between the **1 Jan 2012 – 31 Dec 2029 inclusive.**

The Plan's Legal Status

1.17 The Plan has been prepared to comply with the legal requirements of the Planning & Compulsory Purchase Act 2004, the Planning Act 2008, the Town and Country Planning (Local Planning) (England) Regulations 2012 and the Localism Act 2011. It has also been prepared to be in general conformity with the new National Planning Policy Framework (DCLG, March 2012).

1.18 **The Plan should be read and interpreted in its entirety with due regard paid to all of the relevant policies and proposals included within it.**

1.19 Under the two-tier system, the County Council is the 'local planning authority' for all minerals and waste planning matters for the whole of the County, whilst each of the twelve Essex district/ borough/ city councils takes responsibility for the majority of other local planning decisions, such as for housing, commercial, retail and recreational development in their respective areas.

1.20 The Plan forms part of the statutory 'Development Plan' for Essex and should be read in conjunction with each of the Local Plans/ Local Development Frameworks prepared by the twelve Essex district/ borough/ city planning authorities. Where policies in this Plan refer to the Development Plan this means:

- All the policies in this Plan which are relevant;
- The adopted Essex and Southend Waste Local Plan; and
- The relevant policies in the Local Plan/ Local Development Framework prepared by the appropriate Essex district/ borough/ city council

Marine Aggregate Provision

1.21 This Plan **does not** apply to the maritime coastal and estuarial areas which adjoin the County (measured from the level of mean high water at spring tides). These marine areas are administered separately as stated in the Maritime & Coastal Access Act 2009.

1.22 Proposals for marine dredging of aggregates are decided by the Marine Management Organisation under these policy arrangements. They make decisions in accordance with national maritime policy set out in the UK Marine Policy Statement (March 2011). However in accordance with national policy the Plan does have a role in the safeguarding of transhipment sites and therefore it will safeguard marine wharves and associated facilities.

Minerals Development Covered by Plan

1.23 Minerals are natural substances (solid and liquid) that can be extracted from the earth at surface level or underground by means of mining, quarrying and pumping. In Essex, the key minerals found and worked are sand and gravel, silica sand, brickearth, brick clay, and chalk, and all are worked at surface level. There are no underground mines in the County. Minerals development differs from other forms of development because minerals can only be worked where they occur.

1.24 The following definitions are provided for guidance:

- 'Mineral working' or 'mineral extraction' refers to the quarrying of mineral and the ancillary development associated with this such as processing plants, site offices and weighbridges,
- 'Minerals development' applies more generally to any development primarily involving the extraction, processing, storage, transportation or manufacture of minerals. It includes associated minerals development such as rail aggregate depots, facilities for aggregate recycling, secondary processing facilities such as asphalt and concrete plant, and coastal wharves for mineral transhipment.

1.25 The Plan is applicable to all mineral development in the County. In particular, it covers the following minerals which can be extracted economically in Essex:

- *Aggregates*. This term encompasses sand, gravel, crushed rock and other bulk materials used by the construction industry. The only aggregates extracted in Essex are sand and gravel. The County is one of the largest producers of this aggregate in the UK.
- *Silica Sand*. This is higher value sand which contains a high proportion of silica in the form of quartz and has a narrow grain size. Silica sand is used for a variety of industrial uses and is currently extracted from one site in the Plan Area, located in north-east Essex.
- *Brick Clay*. This is sedimentary material used in the industrial manufacture of bricks, roof tiles and clay. There are two brick making sites in Essex, both of which extract brick clay.
- *Brickearth.* Historically, brickearth was used in Essex for the manufacture of bricks and tiles. Although not currently worked, most of the deposit is found in Rochford District.
- *Chalk*. A form of sedimentary limestone rock produced mostly for agriculture but also used in small amounts in the pharmaceutical industry. Chalk outcrops only occur in the north west of the County, where only one extraction site currently produces white chalk.

Other Useful Information

Web based information and guidance

1.26 The internet is an invaluable tool which can help improve the quality of planning applications for minerals and minerals-related development, and encourage the achievement of best practice right across the extraction, recycling and construction industries.

The County Council encourages all potential applicants to consult internet resources and to seek the early advice of the Mineral Planning Authority when formulating their future proposals.

2.0 Spatial portrait and key minerals planning issues

2.0 Spatial Portrait and Key Minerals Planning Issues

Essex at a Glance

2.1 It is necessary to understand the characteristics of Essex and key drivers for future development.

Population and Economy

- Essex is one of the largest counties in England in terms of land area and has a resident population of 1,393,600 persons and growing (ONS, 2011 Census).
- There are three national growth areas in Essex: the Thames Gateway, Haven Gateway and West Essex Alliance respectively; and four growth centres at Basildon, Chelmsford, Colchester, and Harlow.
- The revisions to the East of England Plan (March 2010) proposed the construction of 100,000 new homes in Essex from 2011 to 2031.
- There is a substantial employment base including major manufacturing enterprises, service sector functions, logistics and international transport gateways.
- While mineral production represents a small proportion of economic output (quarrying provides several hundred jobs) it plays a vital strategic role in facilitating the County's economic growth and regeneration.

Transport Infrastructure

- The strategic road and rail network forms a 'wheel and spoke' pattern reflecting the economic dominance of London and the importance of the main distribution networks.
- Trunk roads and rail routes all suffer from congestion and capacity limitations.

Environment

- 70% of the 369,394ha land area of Essex is productive farmland. Half of this land is graded as Grade 1, 2 or 3a under the Agricultural Land Classification, meaning it is of a high quality.
- Much of the 180 mile long coastline is of international/ national biodiversity importance
- 29 species and 15 habitats are classed as vulnerable or in need of protection or safeguarding.
- There are 14,000 Listed Buildings, 296 Scheduled Monuments, 37 Historic Parks & Gardens and 21,000 recorded archaeological sites.

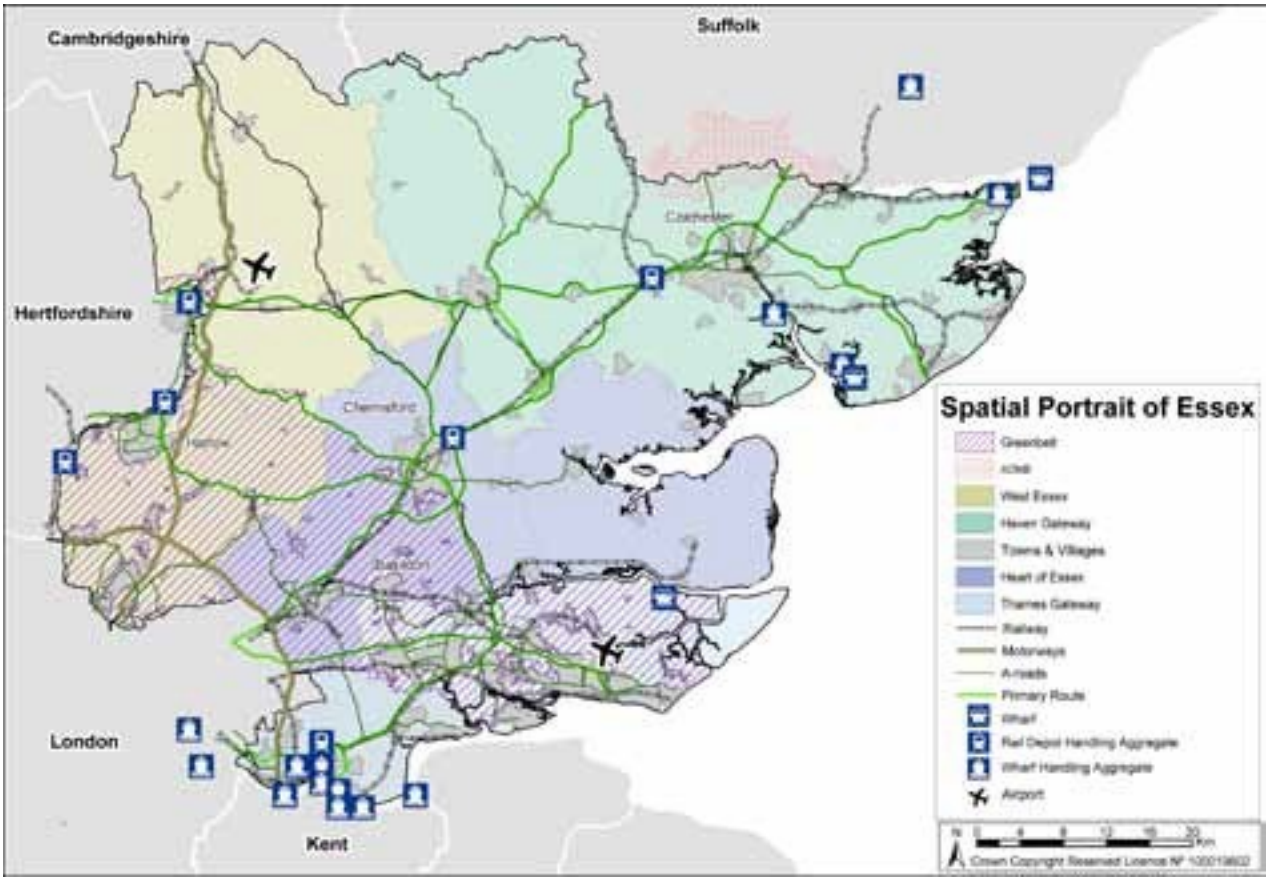
- An extensive part of the south and west of the County is covered by the Metropolitan Green Belt. There is one Area of Outstanding Natural Beauty (AONB) at Dedham Vale in the north east.
- This County expects to face challenges arising from changes in climatic conditions, including flood events, droughts and sea level rise.

Geology & Mineral Infrastructure

- Essex has extensive deposits of sand and gravel.
- There are more localised deposits of silica sand, chalk, brickearth and brick clay.
- Marine dredging takes place in the extraction regions of the Thames Estuary and the East Coast, whilst aggregate is landed at marine wharves located in east London, north Kent, Thurrock, and Suffolk. Essex has no landing wharves of its own.
- There are no hard rock deposits in the County so this material must be imported into Essex. This currently occurs via rail to the existing rail depots at Harlow and Chelmsford.
- Essex is the largest producer and consumer of sand & gravel in the East of England. There are 20 permitted sand & gravel sites, one silica sand site, two brick clay and one chalk site.
- There are two marine wharves and four rail depots capable of handling aggregate. Construction, demolition and excavation waste is also recycled at 29 dedicated and active aggregate recycling sites (2011).
- Aggregate is both imported into Essex (hard rock, and sand and gravel) and exported (sand and gravel, primarily to London). Map 3 shows the movement of aggregate in and out of Essex.

2.2 A portrait of Greater Essex, highlighting the spatial location of much of the information above, is presented as Map 2. (2)

Map 2. Spatial Portrait of Greater Essex



Spatial Portrait

County of Essex

2.3 The County of Essex is located to the north east of London, and is bordered to the east by the North Sea and to the south by the River Thames. The County's northern boundary is delineated by the River Stour for much of its length adjoining Suffolk; and to the west the boundary is defined by the River Lea for much of its length, adjoining Hertfordshire. The River Lea extends south to London.

(2) While the Plan area does not include the unitary authorities of Southend-on-Sea and Thurrock, given the inter-relationships with the County, they are shown for indicative purposes

2.4 The South East Local Economic Partnership was established in 2011 to promote economic and business performance in the combined area of East Sussex, Essex, Kent, Medway, Southend and Thurrock. Local Economic Partnerships (LEP) were bought in to replace Regional Development Agencies and feature representatives of both local authorities and local businesses working together to promote business growth and employment in their respective areas.

2.5 The County itself holds an excellent strategic location in the prosperous south east of England and has access to large domestic markets, a close proximity to London and good transport connections to mainland Europe. The north of Essex is close to the world leading academic, research and development, and life sciences cluster in the Cambridge area.

2.6 Essex is well connected to these economic markets by both road and rail. The M25, M11, A12, A127, A120, and A13 provide the main road arteries. These road corridors, with the exception of the London orbital M25 motorway, are also matched by national rail corridors providing for passengers and freight (London to Cambridge; London to Norwich; and London to Southend).

2.7 Harwich International Port, one the UK's most important sea ports, is located to the north-east of the County and provides regular services to the continent. In north- west Essex, Stansted Airport on the M11 motorway is London's third largest airport for passengers and freight. The recently extended Southend Airport in south-east Essex is developing its role as a regional airport serving Essex, London and the South East.

2.8 The southern part of Essex is heavily urbanised with a complex pattern of large to medium-sized towns. Overall, this compact area accommodates over 660,000 residents with the main urban centre being Basildon alongside other major urban centres in neighbouring Southend and Grays, Thurrock. This area is notable for its large economic base and strong focus on port and logistics activities. London Gateway port is under development and this area forms part of the Thames Gateway which is a national growth area and the largest regeneration project in western Europe.

2.9 Further north in the County there is a well scattered pattern of settlements with three major urban centres widely separated by extensive rural areas containing smaller towns and villages. The major centres are Chelmsford and Colchester, both located on the A12/ Great Eastern rail corridor with over 100,000 residents each, and Harlow, located on the M11/ West Anglia rail corridor and currently with approximately 80,000 residents, but identified for further major growth.

2.10 Braintree, Colchester and Tendring in north-east Essex are, along with parts of neighbouring Suffolk, within the national growth area of Haven Gateway. They are associated with significant urban growth, major ports and logistics activities, information and communications technology (ICT), and research and development activities.

2.11 Rural areas, which comprise three-quarters of the County's administrative area, contain environmental assets of considerable importance. There are extensive areas of high quality agricultural farmland (within grades 1, 2 and 3a of the Agricultural Land Classification), of which much is underlain by sand and gravel, a network of ancient woodland and major sites of international and national importance for biodiversity. There are numerous historic towns and villages as well as many archaeological sites and heritage features of national significance.

2.12 Dedham Vale in north Essex/ south Suffolk is the only designated AONB in the County. There are however proposals to extend the Suffolk Coast & Heaths AONB to cover the Tendring side of the Stour estuary in Essex.

2.13 Several important rivers and parts of river systems meander through the low-lying, gently undulating topography of Essex. These are associated with local designations of valued landscape worthy of protection and enhancement. The undeveloped Essex coast is subject to stringent policy protection from future development because of its biodiversity, landscape and heritage importance.

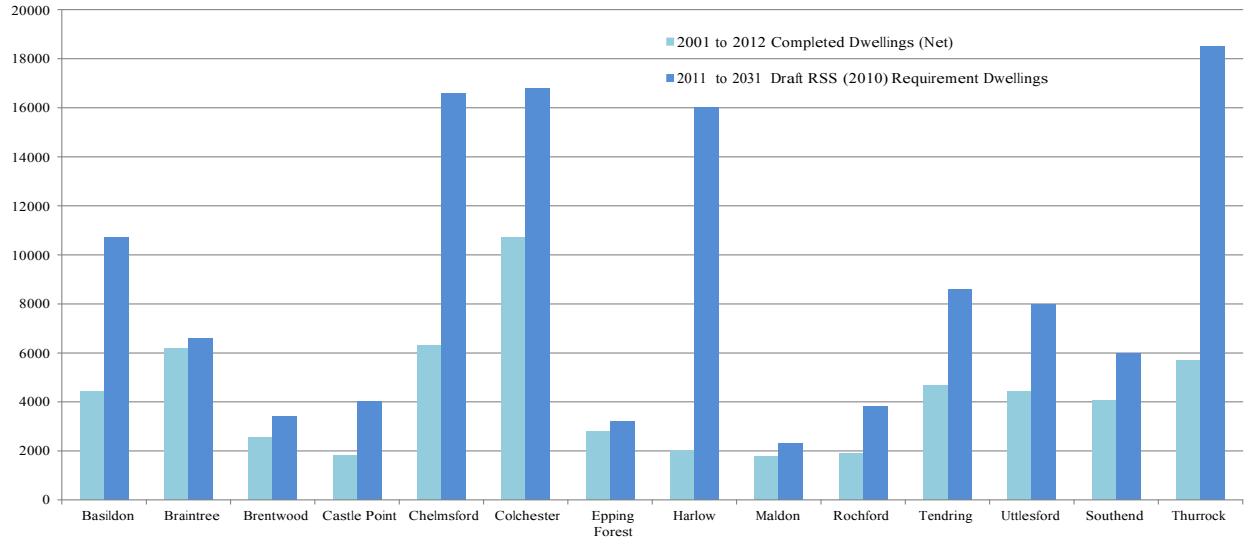
2.14 The Metropolitan Green Belt extends over substantial parts of the western, central and southern parts of the County. The stated purpose of the Green Belt is to avert urban sprawl by, for example, limiting the outward spread of London, preventing the joining together of existing settlements and safeguarding the countryside from urban encroachment. The Green Belt prevents urban sprawl by ensuring that land within designated Green Belt boundaries is kept permanently open. The NPPF states that minerals development need not be inappropriate development in the Green Belt so long as the openness of the Green Belt is preserved and proposals do not conflict with the purpose of including land in the Green Belt.

2.15 Essex is likely to face challenges arising from future changes in climatic conditions including flood events, droughts, and sea level rise. The County must adapt and mitigate for these impacts, and all proposed new development, including mineral development, must be mindful of this. Further details about the risks are set out in 'Essex County Council's Climate Change Adaptation Plan' (July 2011).

Future Growth

2.16 The future pattern of growth within Essex is expected to influence where the future local demand for minerals will predominantly arise. While all districts will experience growth, development and change, the focus will be on the main urban centres of Basildon, Chelmsford, Colchester and Harlow. For brevity they are referred to as 'Key Centres' throughout the remainder of this Plan. These Key Centres will continue to be the main drivers of significant economic and housing growth in Essex. They will be the focus for employment, retailing and other commercial activities, education, health care, administration, culture and tourism. They will continue to provide good access to interchange facilities for public transport serving both urban and inter-urban travel. More limited growth will be focussed on the market and coastal towns elsewhere in the County.

Figure 1. Indicative Housing Growth in Essex up to 2031



2.17 Figure 1 provides an indication of the possible scale and distribution of housing growth to 2031 as contained in the Draft Revision to the East of England Plan (March 2010). Although never subject to Examination due to the abolition of Regional Spatial Strategies, the Draft Revision represents the most recent proposal for future dwelling provision prepared on a consistent basis across Essex and the East of England region. For Greater Essex the Draft Revision proposed an annual average provision of 6,230 dwellings a year between 2011 and 2031.

2.18 This strategic pattern of growth is, and continues to be, planned for through the Local Plans/ Local Development Framework documents prepared by each Essex district/borough/ city authorities. As of July 2013, a Local Plan or Core Strategy had been adopted by Braintree, Chelmsford, Colchester and Rochford. The remaining Essex districts/ boroughs are at various stages of preparing an updated Local Plan.

Planned Major Infrastructure Schemes

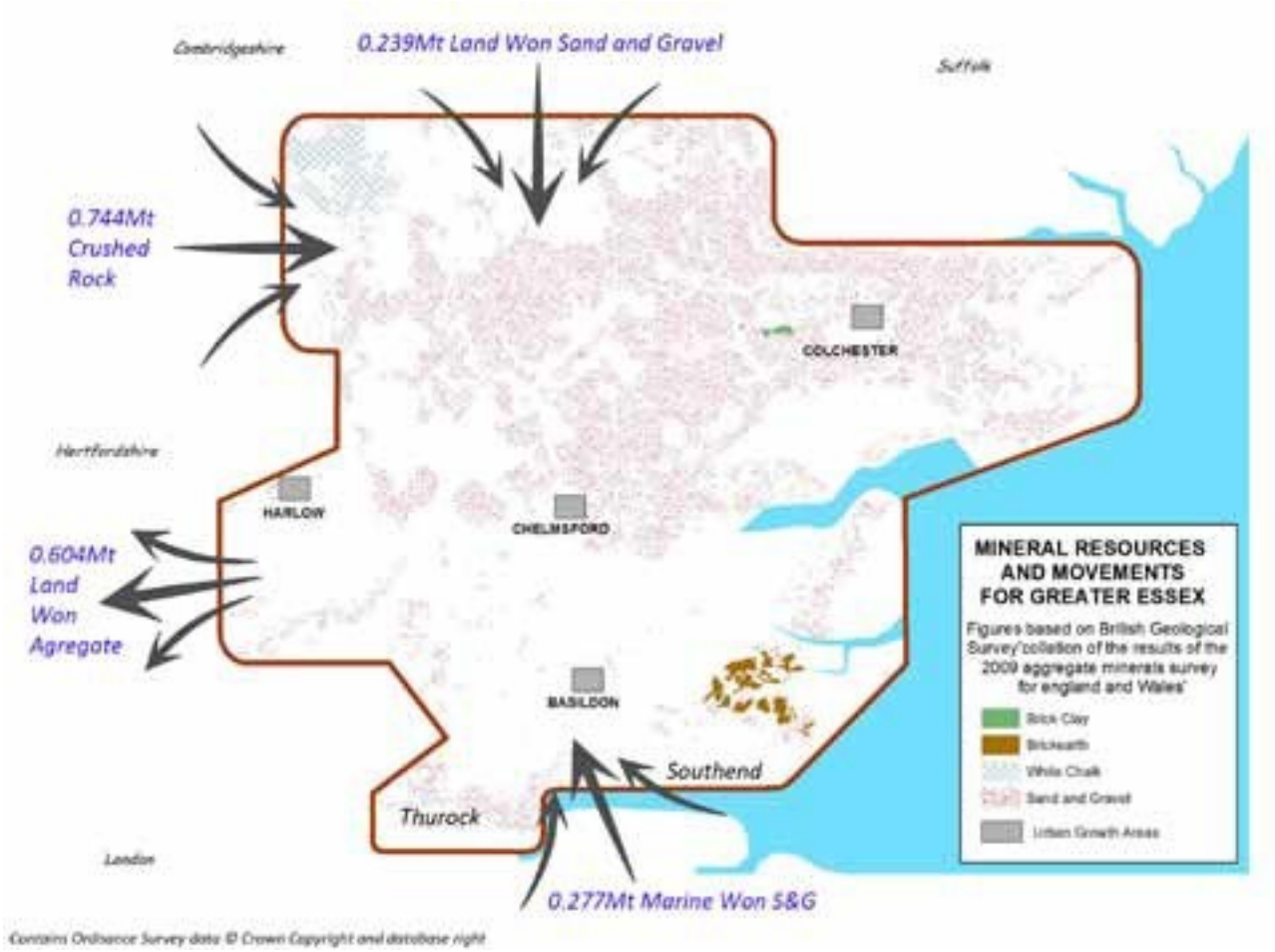
2.19 There are several major infrastructure projects located in Essex or in neighbouring areas which may require aggregates for their construction. These projects include,

- A Government commitment to the construction of a new Lower Thames Crossing between Greater Essex and Kent,
- The current construction of Crossrail across Greater London between Maidenhead (Berkshire) in the west and Shenfield, Brentwood in the east,
- Bradwell (in Maldon district) has been identified as a potentially suitable location for the construction of a new nuclear power station,
- At London Gateway (Shellhaven, Thurrock) planning approvals have been given for a major infrastructure development on 283ha, equating to include the UK's

largest container port (with an annual throughput of 3.5 million TEU[3]), other port facilities for roll-on/ roll-off and bulk traffic, a major business park and logistics centre (947,000m^2 of commercial space), and on an adjoining site for a major new power station (900 MW, combined cycle gas turbine),

- At Bathside Bay in Harwich planning approval has been granted for the construction of one of the largest container terminals in the UK with an annual throughput of 2.1 million TEU.

Map 3. Spatial Pattern of Mineral Resources in Essex



(3) TEU refers to twenty foot equivalent unit, a description of a standard container size

County Mineral Resources

2.20 **Map 3** sets out the spatial supply pattern and indicative movements of aggregates into and out of Essex. This is explained below.

Sand and Gravel

2.21 Essex has extensive Kesgrave formation sand and gravel which was laid down during the Ice Age and in river terraces. The river terrace deposits are found not only along current river valleys, but also in historic river channels that are now dry.

2.22 The sand and gravel resources in Essex are:

- Significant in national, sub-national and local terms - Essex is one of the largest producers in the UK,
- Most geographically extensive and significantly mixed within the centre and north of Essex – namely the districts of Uttlesford, Braintree, Chelmsford, Colchester and Tendring,
- Least extensive in south east Essex where deposits appear smallest and least workable, such as in the districts of Maldon and Rochford,
- Present along the River Lea valley terraces adjoining Harlow and Epping Forest districts,
- Mixed deposits capable of being processed to supply a range of construction products including building sand, sharp sands and gravel,
- Used as a raw material to produce concrete, mortar, asphalt and construction fill which is used in the construction industry and for roads,

2.23 The majority of the sand and gravel produced in Essex (about 78%) is used within the County itself. This position looks unlikely to change over the long-term. Consequently the main factor influencing production of sand and gravel in the future will be the need to meet the minerals demand for the whole of Essex created by major development and new infrastructure projects within Essex itself.

Silica Sand

2.24 Silica sand is another significant mineral resource found in Essex. It is classified as an ‘industrial sand’ and its distinction from construction sand is based on its applications/ uses and market specification. Silica sand contains a high proportion of silica in the form of quartz and has a narrow grain size distribution compared to other sand in Essex.

2.25 The silica sand resources in Essex are:

- Processed for industrial purposes at Ardleigh from a mixed resource, north-east of Colchester. Industrial uses include glassmaking, foundry casting, ceramics, chemicals and water filtration

- Capable of reaching selling prices some 20 times above that of regular construction aggregates, allowing them to serve a wider geographical market as the relatively high price off-sets transport costs.

Brickearth and Brick Clay

2.26 Brick clay is currently used in the small-scale manufacture of bricks, roof tiles and clay materials, at two sites in Essex, namely Bulmer Brickworks in north Essex and Marks Tey, west of Colchester.

2.27 Brickearth is found in shallow seams in south east Essex particularly in Rochford District although this is not currently worked. There is however no compelling reason as to why this material should not be extracted economically at some point in the future, so the resource needs continued protection.

2.28 The brick clay and brickearth resources in Essex are:

- Capable of economic use in the small-scale manufacture of bricks, roof tiles and clay materials,
- Present in isolated and localised pockets within the County – their geographic presence is very limited to a few key locations,
- Used for specialist uses such as the construction and restoration of buildings and serving markets of a more sub-national and local character,
- Worthy of safeguarding to conserve their continued availability for future generations.

Chalk

2.29 Chalk is one of the mainstays of ‘solid geology’ under Essex and is the oldest rock exposed at the surface. The chalk resources in Essex are:

- Extensive under the surface but outcrop only in the north west, particularly in Uttlesford District
- Currently extracted at only one site in the form of white chalk at Newport Quarry
- Used mostly for agricultural use, although small quantities are used by the pharmaceutical industry
- Not associated with a landbank in Essex as it is extracted as an industrial mineral rather than as an aggregate

Mineral Links with other Areas

Hard rock

2.30 Greater Essex does not have any indigenous hard rock so this resource is imported into the County predominantly by rail. Over 0.5mtpa is imported from the East Midlands and South West regions, with total consumption of hard rock equating to over 0.7mtpa. Igneous hard rock is imported from the East Midlands and limestone from the South West, with some imports from outside England. This mineral arrives by train at rail depots in Harlow and Chelmsford.

Marine dredged aggregates

2.31 Marine dredged aggregates provide an important additional source of material for construction aggregates, beach replenishment and some industrial processes. This material is sourced from the seabed off Britain which is controlled and licensed by the Marine Management Organisation.

2.32 No marine dredged aggregates are landed in Essex but there are marine landing points located in neighbouring authorities in north Kent, east London, Thurrock and Suffolk (Ipswich) which are potentially able to serve parts of Essex and contribute to the overall supply coming into Essex. Approximately 10% of the total amount of sand and gravel consumed within Greater Essex is sourced from the marine environment. The potential for an increased contribution of sand and gravel from marine sources will be monitored.

Sand and Gravel

2.33 Although the County is one of the largest producers of sand and gravel in the UK, there are also imports of this resource into Greater Essex. Approximately 9% of the total amount of land-won sand and gravel consumed in Greater Essex is imported.

What mineral resources do we export?

2.34 Approximately 0.6mtpa (22%) of land-won sand and gravel production in Essex is exported to other parts of the country. London is the largest market for land-won sand and gravel produced in Essex. Other nearby external markets include Southend-on-Sea and Thurrock.

How are our minerals transported?

2.35 Most aggregate produced in Essex is transported within the County by Heavy Goods Vehicles (HGV's) on the road network. Only certain roads are appropriate for HGV traffic and the Highway Authority has defined a main road network where such traffic is acceptable. Rail and water-borne transport are more commonly used to transport bulk minerals over longer distances such as when importing hard rock and exporting sand and gravel in and out of the County.

2.36 Aggregate is exported by rail from rail transhipment facilities at Harlow and Marks Tey (near Colchester) and by barge from Fingringhoe Quarry. There are some cross-boundary movements of aggregate by road into and from neighbouring areas (excluding London). Evidence suggests it is more efficient to transport aggregate by road over short distances of up to 60 km (36 miles) and therefore this pattern is expected to continue. The export of sand and gravel to London is undertaken by road, rail and water.

2.37 There is an extensive road and rail network in Essex but the rail network is considerably less flexible for practical aggregate movement around the County. The movement of people takes much of the available rail capacity. Compared to neighbouring areas such as London, Thurrock, north Kent, and Suffolk, the County has a limited water-based transport network and loading/ unloading facilities.

Key Mineral Issues to be addressed by this plan

2.38 The character of the County, policy and guidance, the evidence base and consultation feedback has identified fourteen 'Key Issues' to be addressed by this Plan. Their role in promoting the three main components of sustainable development - economic, social and environmental, is identified at the end of each issue in brackets. They are presented below:

2.39 The plan needs to:

1. Maintain a plan-led approach to future provision, providing reassurance for Essex residents, the minerals industry, key stakeholders and future developers that future needs can be met, whilst also providing a degree of certainty as to where minerals development will take place, (social, economic)

2. Contribute positively to climate change mitigation and adaptation, (environmental)

3. Identify and safeguard potentially important mineral resources for future use, avoiding unnecessary mineral sterilisation, (economic, environmental)

4. Encourage the more prudent use of mineral resources, encouraging sustainable construction, mineral re-use, recycling, and minimising mineral waste, (economic, environmental)

5. Encourage the production and use of recycled aggregate, (economic, environmental)

6. Identify sufficient land-won minerals to meet our future needs to 2029 and to maintain appropriate landbanks (having regard to past levels of sales, likely future demand, the sub-national apportionment requirement and the views of the Aggregates Working Party as monitored through the Local Aggregates Assessment and Annual Monitoring Reports), (economic)

7. Protect existing Preferred and Reserve Sites for extraction so their ability to supply essential resources is not compromised, (economic)

8. Enable minerals to be processed to optimise the resource for sustainable development, (economic, environmental)

9. Ensure mineral lorries travel on the most appropriate roads in the main road network, (environmental)

10. Enable HGV distances to serve Essex are reduced to minimise carbon emissions, having regard to the locations of Preferred and Reserve Sites and mineral demand, (economic, social and environmental)

11. Safeguard rail and water mineral transhipment sites, essential to meeting future needs, (economic, environmental)

12. Manage the adverse impacts of mineral development, to ensure the environment, amenity and communities are protected, (social, environmental)

13. Achieve positive benefits from the restoration and after-use of minerals sites, (social, environmental)

14. Ensure prior extraction is considered when other necessary development might sterilise viable mineral resources, (economic)

2.40 These issues have been identified from the following sources:

- National, sub-national and local policies which provide a background policy context about what the Plan's scope and content should cover,
- The technical evidence base and specialist assessments which have identified the issues to be addressed,
- The results of successive rounds of public consultation which have enabled stakeholders to express views about issues, different policy approaches, and relative priorities,
- Co-ordination with other forward planning documents which are relevant in influencing and shaping the Plan's content,
- Active engagement with the Essex district/ borough/ city councils, other mineral planning authorities and other public bodies, including engagement under the Duty to Co-operate, as well as key stakeholders including the mineral industry and Aggregates Working Party.

3.0 The strategy

3.0 The Strategy

Spatial Vision

3.1 The Vision provides a picture of how mineral and mineral related development will be provided in the County during the period up to 2029. It is the MPA's view of sustainable mineral development in Essex.

Table 1. Vision for Essex to 2029

(A) Sustainable Development
Minerals development will make a positive contribution to Essex through a plan-led, collaborative approach which promotes the sustainable use, re-use, recycling and extraction of minerals. Sustainable mineral and mineral-related development will be approved without delay when in accordance with this Plan.

(B) Primary Mineral Provision
Essex will continue to be a major producer and user of sand and gravel, with the majority of that produced being used within the County itself. This will enable the planned growth within district/ borough/ city authority plans to occur and facilitate the maintenance of existing infrastructure. A steady and adequate supply of sand and gravel will be provided, having regard to the Local Aggregate Assessment and the targets agreed with the East of England Aggregates Working Party. Phasing has been introduced so as to avoid over-supplying in order to protect Essex's environment and our finite mineral resources. Plan provision will also be made for silica sand and brick clay.

(C) Co-ordinating the Supply of Minerals into Essex
Sources of aggregate, whether primary, secondary or recycled, will be planned to serve the whole of the county and wherever possible located in proximity to the County's main growth centres - Basildon, Chelmsford, Colchester, and Harlow, and the South Essex Thames Gateway, Haven Gateway and West Essex Alliance (formerly M11 corridor) growth areas, to maintain an appropriate match between mineral supply and demand. The lack of primary aggregate resources in the south and west of the County will be addressed to ensure that planned urban growth can take place without unnecessarily long transport distances. The existing infrastructure of rail depots and marine landing wharves in Essex and neighbouring Thurrock, in particular, will be important in this regard. The long distance importation of aggregates will be maintained to ensure provision of non-indigenous minerals.

(D) Protecting Amenities and Communities
All minerals development will be well-designed to afford protection to local communities and to contribute to the enhancement of the built, natural and historic environment. Mineral developers will engage with communities to create the most appropriate local solutions.

(E) Climate Change
Ensuring all minerals development is located, operated and managed whilst having regard to climate change mitigation and adaptation, so the County plays its part in reducing greenhouse gas emissions and is resilient to potentially more extreme future weather conditions.

(F) Reduce, Re-use and Recycling of Minerals
Minerals previously extracted from the ground will be put to better use. The recycling and reuse of construction, demolition and excavation waste will be maximised, by safeguarding existing Strategic Aggregate Recycling Sites (SARS) and locating new facilities in proximity to the key centres of Basildon, Chelmsford, Colchester and Harlow. The Council promotes sustainable procurement and construction techniques and the use of alternative building materials in accordance with national and local policies.

(G) Protecting Mineral Resources and Facilities
The needless sterilisation of mineral resources by development will be avoided by designating 'Minerals Safeguarding Areas' (MSA's) for sand and gravel, chalk, brick clay and brickearth. Existing, permitted, Preferred and Reserve mineral sites and mineral supply infrastructure will be safeguarded to ensure the effective operation of these sites is not compromised, and to prevent incompatible development taking place close to existing or planned minerals development to the potential detriment of existing or future occupants.

(H) Restoration and After-use
Mineral workings are temporary in nature. Restoration and after-use schemes will continue to be integral to site selection and the consideration of planning applications, with progressive working and restoration schemes expected. The focus of after-use will shift from purely agricultural uses, important though they remain, towards enhancement of the local environment by means of increased provision for biodiversity, geodiversity, climate change adaptation and outdoor recreation, including Public Rights of Way.

(I) Communities
Collaborative working arrangements will forge stronger links with communities, stakeholders and local planning authorities, as well as neighbouring and more distant planning authorities on whom we rely for non-indigenous minerals. Collectively we will address the sustainable long-term supply of primary aggregates and the protection of public amenity.

(J) Economy and Long Term High Quality Environment and Landscape
As well as bringing economic advantage, effective collaborative working will ensure minerals development makes a positive contribution to our environment and biodiversity, through the protection and creation of high quality habitats and landscapes that contribute to a high quality of life for present and future generations.

Aims and Strategic Objectives

3.2 The Vision outlined above will be expressed and delivered through the aims and objectives set out below. Individual objectives are cross-referenced (in brackets) to the three dimensions of sustainable development.

Aims	Strategy Objectives
1. To promote sustainable development.	1. To ensure sustainable minerals development can be approved without delay in accordance with the presumption in the National Planning Policy Framework. 2. To ensure minerals development supports the proposals for sustainable economic growth, regeneration, and development outlined in adopted Local Plans/ LDFs prepared by Essex district/ borough/ city councils. 3. To ensure that minerals development in the County fully promotes sustainable development. 4. To ensure certainty for both developers and the public. (economic, social, and environmental)

Aims	Strategy Objectives
2. To promote a reduction in greenhouse gas emissions including carbon, and to ensure that new development is adaptable to changes in climatic conditions.	5. To ensure that minerals and associated development provides for, • The minimisation of greenhouse gas emissions during the winning, working and handling of minerals. • Sustainable patterns of minerals transportation. • The integration of features which promote climate change mitigation and adaptation into the design of minerals restoration and after-care proposals. (environmental)
3.To promote social inclusion, human health and well-being.	6. To ensure that local communities are consulted and their views considered during the development of minerals proposals and in the determination of planning applications for minerals development. 7. To ensure that the impacts on amenity of those people living in proximity to minerals developments are rigorously controlled, minimised and mitigated. (social)
4. To promote the efficient use of minerals by using them in a sustainable manner and reducing the need for primary mineral extraction.	8. To reduce reliance on primary mineral resources in Essex, firstly through reducing the demand for minerals and minimising waste, and secondly, by the re-use and use of recycled aggregates. (economic, social, and environmental)

Aims	Strategy Objectives
5. To protect and safeguard existing mineral reserves, existing permitted mineral sites and Preferred and Reserve Sites for mineral extraction, as well as existing and proposed sites for associated mineral development.	9. To identify and safeguard the following mineral resources in Essex: • Sand and gravel, silica sand, brickearth, brick clay and chalk reserves which have potential future economic and/ or conservation value. Unnecessary sterilisation should be avoided. • Existing and potential secondary processing and aggregate recycling facilities that are of strategic importance for future mineral supply to ensure that these are not compromised by other non-mineral development. (economic, social, and environmental)
6. To provide for a steady and adequate supply of primary minerals to meet future requirements.	10. To provide for a steady and adequate supply of primary aggregates and industrial minerals by: • Safeguarding transhipment sites for importing and exporting mineral products. • Meeting the mineral provision targets agreed by the East of England Aggregates Working Party, or as indicated by the Local Aggregate Assessment. • Identifying suitable mineral extraction sites through site allocations in the Plan (economic)

Aims	Strategy Objectives
7. To protect and enhance the natural, historic and built environment in relation to mineral extraction and associated development.	11. To provide protection from minerals development to designated areas of landscape, biodiversity, geodiversity, cultural and heritage importance, in a manner which is commensurate with their importance. 12. To secure high quality restoration of extraction sites with appropriate after-care to achieve new after-uses which are beneficial and enhance the local environment. 13. To maintain and/or enhance landscape, biodiversity and residential amenity for people living in proximity to minerals development. (environmental, social)
8. To reduce the impact of minerals extraction and associated development on the transport system.	14. To achieve more sustainable patterns of minerals transportation by: • Giving preference to identifying local sources of aggregate as close as reasonably possible to urban growth areas and growth centres. • Optimising how mineral sites gain access to the strategic road network. • Mitigating the adverse traffic impacts of mineral extraction and associated development by appropriate traffic management measures. • Increasing the use and availability of rail and water facilities for the long haul movement of mineral products. (economic, social, and environmental)

Spatial Priorities for Minerals Development

Role of the strategic priorities

3.3 The strategic priorities in this Plan are designed to deliver the collective Vision and agreed objectives for the County of Essex set out above and have been prepared to support and encourage sustainable development. They provide the essential framework to ensure that the right amount of minerals development takes place in appropriate locations, and at the right time, whilst respecting the constraints and maximising the opportunities provided by our unique environment. To this end, the Plan identifies Preferred and Reserve Sites for future development. The strategy provides an investment, delivery and decision-making framework for the minerals industry, our partner local authorities, public bodies and other interested stakeholders.

Achieving sustainable development

3.4 'Sustainable development' has been defined at many levels. International, European Union and national bodies define sustainable development "as meeting the needs of the present without compromising the ability of future generations to meet their own needs". The NPPF defines 'sustainable' as 'ensuring that better lives for ourselves don't mean worse lives for future generations', with 'development' defined as meaning 'growth'.

3.5 The need to achieve sustainable development is a key driver and the policies in the NPPF taken as a whole constitute the Government's view on what sustainable development in England means in practice for planning. In essence there are three dimensions to sustainable development which give rise to the need for planning and these are all applicable to minerals planning. These three dimensions are as below:

- An economic dimension, including contributing to the economy, ensuring sufficient land is available in the right places and at the right time to support growth,
- A social dimension, including supporting strong, vibrant and healthy communities by providing the supply of housing to meet needs of the present and the future,
- An environmental dimension, contributing to protecting and enhancing our natural built and historic environment, and as part of this help to improve biodiversity, use natural resources prudently, minimise waste and pollution, and mitigate and adapt to climate change.

3.6 For minerals development in Essex, these three dimensions can be briefly interpreted and summarised as follows:

Table 2. Sustainable Mineral Development in Essex

Dimension	Key features
Economic	• Safeguarding sand and gravel, brickearth, brick clay and chalk. • Safeguarding strategic mineral facilities. • Making planned provision for a steady supply of aggregates and other minerals to meet identified requirements. • Providing an effective county-wide network of mineral extraction sites and related mineral development. • Supporting major development, key centres, growth and regeneration, and major infrastructure projects with an adequate supply of mineral products.
Social	• Ensuring there are adequate reserves available to meet the County's housing, commerce, transport and community infrastructure needs on which we depend for our way of life. • Promoting public health, well being and safety. • Encouraging the people and businesses of Essex to influence decisions on mineral development and shape their communities. • Using mineral proposals, site restoration and aftercare schemes to deliver benefits to local communities, including outdoor recreation, environmental assets, biodiversity, green infrastructure and landscape enhancements.
Environmental	• Reducing greenhouse gas emissions by minimising the distance of mineral extraction to markets and adapting to climate change impacts. • Promoting the mineral supply hierarchy to reduce the need for the primary extraction of minerals. • Minimising the environmental impacts of mineral development and encouraging minerals development to reach high environmental standards. • Protecting communities from adverse environmental impacts. • Using mineral proposals, site restoration and after-care schemes to deliver positive environmental enhancement and new assets including biodiversity and habitats, green infrastructure and landscape enhancements.

3.7 This plan jointly applies these three dimensions when guiding development.

Presumption in favour of sustainable development

3.8 At the heart of the National Planning Policy Framework (NPPF) is a 'presumption in favour of sustainable development' which should be seen as a golden thread running through both plan-making and decision-taking. The wording of the presumption is set out in paragraph 14 of the NPPF.

3.9 The policies and allocations included in this Plan will deliver what is considered to be sustainable development in Essex.

3.10 The strategic policy below has been included to clarify the operational relationship between national policy in the NPPF and this Local Plan. The NPPF is a material consideration in the determination of planning applications.

Policy S1- Presumption in favour of sustainable development

The Minerals Planning Authority will take a positive approach to minerals development that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework. It will work proactively with applicants to find solutions which mean that proposals can be approved wherever possible, and to secure minerals development that improves the economic, social and environmental conditions in the area.

Planning applications that accord with the site allocations and policies in this Local Plan will be approved without delay, unless material considerations indicate otherwise.

Where there are no policies relevant to the application or relevant policies are demonstrably out-of-date at the time of making the decision, the Minerals Planning Authority will grant permission unless material conditions indicate otherwise – taking into account whether:

- Any adverse impacts of granting planning permission would significantly and demonstrably outweigh the benefits, when assessed against the policies in the National Planning Policy Framework taken as a whole; or
- Specific policies in the National Planning Policy Framework indicate that development should be restricted.

Spatial Vision: Policy links to the delivery of themes A
Strategic Objectives: Policy links to the delivery of objectives 1, 2 and 3

The Strategy

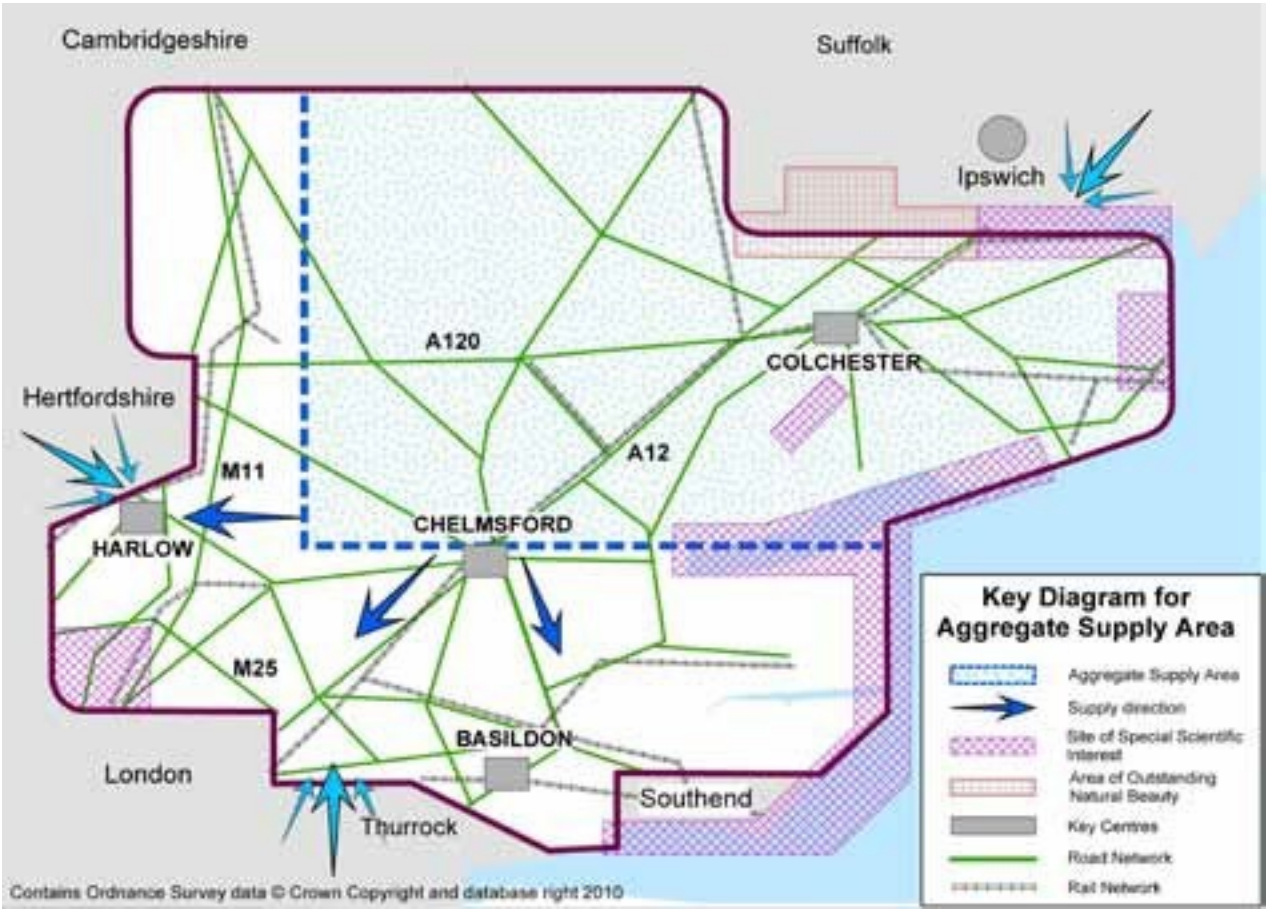
3.11 The Strategy is underpinned by the presumption in favour of sustainable development.

3.12 The spatial strategy adopted by this Plan also aims to ensure that minerals can be dispersed primarily by the main road network and, whilst it is not for the Minerals Planning Authority to restrict the market that minerals may be sold to, the spatial strategy ensures that the mineral sites as a whole are well placed to serve all of Essex. The aim of the spatial strategy is to support the key growth areas and reduce minerals miles, whilst respecting that minerals can only be extracted where they occur and that there are specific localised constraints which will inhibit mineral developments in certain localities.

The Strategy of the Plan therefore is:
To provide for the best possible geographic dispersal of sand and gravel across the County, accepting that due to geographic factors the majority of sites will be located in the central and north eastern parts of the County (to support key areas of growth and development and to minimise mineral miles) with a focus on extending existing extraction sites with primary processing plant, and reducing reliance on restoration by landfill.

3.13 The strategic priorities to achieve this aim are set out in Policy S2 and the broad locations for new mineral development are set out in Map 4 below.

Map 4. Key Diagram



Policy S2- Strategic priorities for minerals development

The strategic priorities for minerals development are focused primarily on meeting the mineral supply needs of Essex whilst achieving sustainable development. The strategy will promote this by:

1. Ensuring minerals development makes a contribution towards reducing greenhouse gas emissions, is resilient and can demonstrate adaptation to the impacts of climatic change,

2. Ensuring there are no significant adverse impacts arising from proposed minerals development for public health and safety, amenity, quality of life of nearby communities, and the environment,

3. Reducing the quantity of minerals used and waste generated through appropriate design and procurement, good practices and encouraging the re-use and the recycling of construction materials containing minerals,

4. Improving access to, and the quality and quantity of recycled/ secondary aggregates, by developing and safeguarding a well distributed County-wide network of strategic and non-strategic aggregate recycling sites,

5. Safeguarding mineral resources of national and local importance, mineral transhipment sites, Strategic Aggregate Recycling facilities and coated roadstone plants, so that non-minerals development does not sterilise or compromise mineral resources and mineral supply facilities,

6. Making planned provision through Preferred and Reserve Site allocations for a steady and adequate supply of aggregates and industrial minerals to meet identified national and local mineral needs in Essex during the plan-period whilst maintaining landbanks at appropriate levels,

7. Providing for the best possible geographic dispersal of sand and gravel across the County to support key areas of growth and development, infrastructure projects and to minimise mineral miles,

8. Ensuring progressive phased working and the high quality restoration of mineral extraction developments so as to:

a) significantly reduce reliance upon the use of landfill materials and,
b) provide beneficial after-use(s) that secure long lasting community and environmental benefits, including biodiversity, and,
c) protect the best and most versatile agricultural land.

9. Maintaining and safeguarding transhipment sites within the County to provide appropriate facilities for the importation and exportation of minerals.

Spatial Vision: Policy links to the delivery of all themes
Strategic Objectives: Policy links to the delivery of all objectives

Adapting to climate change

3.14 Climate refers to average weather conditions such as rainfall, temperature and humidity expected at a particular place. In recent years our climate and weather patterns have become more disrupted and unpredictable, and long-term projections suggest further climatic changes.

3.15 These include milder and wetter winters and hotter, drier summers. By 2080 sea levels may have risen by 36cm on the Essex coast altering the physical extent of unprotected coastlines. There are likely to be more frequent severe weather conditions (such as storms, flood events, strong winds and extreme hot or cold temperatures). Drought periods may become more commonplace with implications for the availability of water supplies and impacts on water tables and river levels.

Key policy drivers

3.16 The key policy drivers to reduce greenhouse gas emissions and build adaptation and resilience to the effects of climate change are the Kyoto Protocol, the Climate Change Act 2008, the UK Low Carbon Transition Plan, the Civil Contingencies Act 2004, the Flood and Water Management Act 2010 and the National Planning Policy Framework.

How can minerals development adapt?

3.17 Proposals for minerals development should consider the need to reduce greenhouse gas emissions and build-in resilience and adaptability to climate change effects. Possible measures will vary depending on the particular circumstances of each minerals development proposal. Nevertheless, there are a number of key ways that minerals development can respond to climate change issues.

3.18 **Greenhouse gas emissions.** Increased emissions contribute to global climate change effects. Minerals development should be located and designed to help reduce emissions, wherever possible, through good design and fuel efficient and well maintained processing plant and vehicles.

3.19 All 'Transport Assessments' and 'Site Transport Plans' submitted in support of planning applications should provide information on the consideration given to the sustainable transport of minerals and to the measures proposed to achieve reduced emissions.

3.20 **Energy supplies.** Developers should consider whether the use of renewable and low carbon energy generation on-site is feasible and viable for their mineral development. Proposals may provide the potential to generate electricity to meet some or all of their energy needs, such as through solar panels.

3.21 **Water efficiency.** Where appropriate, mineral site operators should install plant and devices, make use of water recycling and storage facilities, and use best practice methods to improve water efficiency. For instance, this includes the use of winter storage reservoirs to ensure a reliable supply of water for mineral washing throughout the summer months.

3.22 **Sustainable Drainage Systems (SuDS).** The Flood & Water Management Act 2010 requires all new development incorporating SuDS to be approved by the SuDS Approval Body. The appropriate use of SuDS encourages the provision of more sustainable water and drainage systems. This brings potential benefits including reducing water demand, through recycling and re-use, to flood alleviation and minimising flood impacts if they do occur.

3.23 Surface water drainage systems should always be designed in accordance with current policy (with regard to both national and local principles and standards) and good practice.

3.24 **Unexpected climatic events.** Proposals for minerals development should consider the adaptation measures required to deal with the possible impacts of excess heat and drought, storm events and high winds. Site operators should consider these factors to ensure on-site resilience.

3.25 **Coastal change.** Historically, mineral developments have been located close to the Essex coast, and some active mineral sites remain located there. Future mineral development close to the coast must have regard to coastal change issues. These include sea level rise, coastal storm events and the risk of coastal flooding, erosion and subsidence. In coastal areas, developers should have regard to the UK Marine Policy Statement and marine plans, Shoreline Management Plans, Coastal Change Management Areas, Strategic Flood Risk Assessments and relevant local plan policy guidance.

3.26 **Restoration and after-use.** Restoration and after-use schemes for mineral workings provide new opportunities to adapt to climate change. Examples include through the provision of flood water storage and alleviation measures, biodiversity and habitat creation, and the provision of natural landscape features including tree planting. Trees can also act as living carbon sinks. Any feature which absorbs carbon from the atmosphere is known as a carbon sink, acting as a reservoir which can accumulate and store carbon compounds for an indefinite period. Living carbon sinks are natural examples of these, and as well as trees, include the absorption of carbon dioxide from the atmosphere by plants and reed beds.

Consideration of mineral proposals

3.27 Proposals for minerals development should demonstrate to the Mineral Planning Authority (MPA) whether they can contribute towards a reduction in greenhouse gas emissions and provide for resilience and adaptability in responding to the effects of climatic change. The information supplied and the measures to be incorporated/ implemented should be proportionate to the scale and nature of the proposals, such that large-scale mineral proposals will provide more information and be expected to show greater mitigation and adaptation measures than small-scale mineral proposals. Where proposals are subject to the Environmental Impact Assessment (EIA) Regulations, some information regarding climate change will be provided through this procedure, and this need not be duplicated.

3.28 Proposals for minerals development, including extraction and ancillary development, should demonstrate that they have been designed to ensure that any adverse impact on climate change is minimised. Opportunities for reducing non-renewable energy, water consumption and maximising energy efficiency should be considered alongside the reduction of mineral waste, other wastes and waste-water during site construction/ preparation and for the life of the development/ operations. Mitigating the impact of climate change by designing measures into schemes to offset greenhouse gas emissions and environmental damage such as, but not exclusively, tree and shrub planting, renewable energy sources, habitat creation/ ecological enhancement, biomass crop production and SuDS should also be considered.

3.29 The following strategic policy provides the framework for the MPA's consideration and determination of minerals development proposals in relation to climate change issues:

Policy S3- Climate change

Applications for minerals development shall demonstrate how they have incorporated effective measures to minimise greenhouse gas emissions and to ensure effective adaptation and resilience to future climatic changes, having regard to:

1. Siting, location, design and transport arrangements,

2. On-site renewable and low carbon energy generation, where feasible and viable,

3. National and local principles/ design standards for Sustainable Drainage Systems, including measures to enhance on-site water efficiency and minimise flood impacts both on-site and in relation to adjacent land and 'downstream' land-uses,

4. On-site resilience to unexpected climatic events,

5. The implications of coastal change, where relevant, and,

6. The potential benefits from site restoration and after-use schemes for biodiversity and habitat creation, flood alleviation, and provision of living carbon sinks.

Spatial Vision: Policy links to the delivery of themes C, D and E
Strategic Objectives: Policy links to the delivery of objective 5

Reducing the Use of Mineral Resources

3.30 The Plan is in full adherence with the Minerals Supply Hierarchy and therefore aims to reduce the demand for, and use of, mineral resources through the minimising of the amount of mineral waste created from the extraction, processing and transportation of minerals as well as through the construction process.

3.31 In this regard, the Plan is consistent with:

- **National waste policy and legislation** – This aims to minimise waste in the first instance and then increase the re-use of waste materials. For waste that cannot be re-used, national policy prioritises recycling followed by treatment and the recovery of value (including energy from waste) in order to divert more waste from landfill. There is also a strong emphasis on planning for net self-sufficiency in waste management.
- **Essex & Southend-on-Sea Waste Local Plan** – (Currently in preparation.) Its Preferred Approach is to actively promote waste reduction, the re-use of waste, waste recycling, composting, energy recovery from waste and finally waste disposal in that priority order. The commitment is made to work in partnership with Essex district/ borough/ city councils, Environment Agency, industrial and commercial organisations and the voluntary sector to minimise the use of raw materials, reduce waste, and re-use and recycle materials.

3.32 Waste policy at the national and local level aims to ensure that as much demolition, construction and excavation waste is re-used or recycled as possible at development/ redevelopment sites in order to provide a supply of recycled mineral products into the future. These national and local aims are directly relevant to the Plan as they act to both reduce the amount of new primary mineral required whilst significantly reducing the volume of inert waste available for the restoration of minerals development sites upon the completion of extraction.

3.33 There are already a number of national schemes in place to promote the sustainable use of primary minerals and this Plan does not need to duplicate them. They include the following:

- Trade association best practice,
- 'Code for Sustainable Homes' and the BREEAM building standards,
- 'Waste and Recycling Action Programme' (WRAP),
- Aggregate Levy,
- Landfill Tax,
- EU Mining Waste Directive (2006/21/EC,
- Environmental Management Standard ISO 14001.

3.34 These national policy initiatives collectively promote the minimisation of waste in mineral extraction, processing and transportation, encourage the use of alternative building materials in development and construction and provide for the increased use of recycled and secondary materials.

3.35 All Essex planning authorities have an important role to play in promoting waste reduction, re-use and recycling, sustainable building design and the use of sustainable materials in development.

3.36 To reduce the amount of Construction, Demolition and Excavation (CDE) waste further, all types of development proposals should provide information on how CDE wastes will be reduced, re-used or recycled during construction and operation of the premises at an appropriate level of detail as part of a planning application. This requirement for sustainable construction should be addressed and promoted through LDF/ Local Plan policies.

3.37 Policy S4: Reducing the Use of Mineral Resources applies to all development across Essex and should be applied by all local planning authorities to promote a reduction in mineral use when determining planning applications for housing, commercial and other development in their area. For example, conditions might be imposed on planning consents requiring:

- De-construction to take place on redevelopment sites to preserve building materials for future re-use;
- On-site recycling and re-use of construction, demolition and excavation wastes on redevelopment sites, where this is environmentally acceptable.

3.38 Several Essex district/ borough/ city councils have LDF/ Local Plan policies and supporting Supplementary Planning Documents (SPD) promoting high standards of sustainable building design. Others have formally adopted the sustainable design and construction guidance which appears in the 'Essex Urban Place Supplement'. The County Council as the Minerals Planning Authority will continue to work jointly with district/ borough/city council colleagues to promote these local policy initiatives.

3.39 The County Council intends to reduce its own mineral use and has recently adopted an 'Environmental Policy Statement' (2011) containing a vision and objectives for managing its own environmental performance and working jointly with strategic partners. The strategic partners include the local authorities within Essex and the South East LEP. The Council is a significant commissioner of new development and construction in capital terms, whether for schools, highways, libraries or other public services. The Council also carries out significant maintenance work on the highways network and our existing infrastructure, and intend to lead by example.

3.40 All developers have the potential to reduce over-ordering of construction materials and encourage more sustainable construction practices through their own procurement practices.

3.41 The policies of the Plan promote the reduction of mineral use by all parties involved in minerals development in Essex, as follows:

- *Mineral sites* – Reducing the volume of mineral waste produced at mineral sites during the extraction, processing and transportation of mineral products through effective pre-application discussions and the imposition of planning conditions and legal agreements on planning consents,
- *Redevelopment sites* – Encouraging the re-use and recycling of construction, demolition and excavation wastes on-site,
- *Recycling facilities* – Where on-site recycling is not environmentally acceptable, ensuring developers have access to alternative recycling facilities within reasonable proximity.

On-site re-use and recycling at redevelopment sites

3.42 Minerals are a finite natural resource which should be conserved prudently for the benefit of future generations and they should not be needlessly consumed by unsustainable practises. A key approach to reducing the demand for minerals in new developments is through encouraging and supporting aggregate recycling.

3.43 Mobile crushing and screening plant are now commonly used on demolition and construction sites where redevelopment is taking place. The recycled aggregate material produced may be re-used in the new development or used on nearby sites, saving primary aggregates for other higher quality uses. The approach varies between redevelopment sites due to the nature of the previous development, on-site practicality and other environmental constraints.

3.44 On-site recycling and re-use is most common in existing urban areas and is considered a major source of recycled aggregates.

3.45 The use of mobile plant is strictly controlled and subject to suitable safeguards imposed by the Environment Agency and environmental health departments of local councils. Proposals should not cause unacceptable impacts or harm to neighbouring land-uses by virtue of noise, vibration, dust, light pollution or heavy road traffic.

3.46 Essex district/ borough/ city councils should promote this policy for on-site recycling in their Local Plans, and in development management decisions on planning applications, where appropriate.

3.47 The following strategic policy is designed to increase the rate of aggregate re-use and recycling in Essex and provide the necessary mineral facilities to help achieve these aims. These are complementary to the approach set out above and they are relevant to all developments and district, borough and city local plans.

Policy S4- Reducing the use of mineral resources

All development proposals shall ensure that mineral waste is minimised and that minerals on development/ redevelopment sites are re-used and recycled. This is to ensure both a reduction in the need for primary minerals and the amount of construction, demolition, and excavation wastes going to landfill. This will be supported by joint working with strategic partners to ensure:

1. The use of best practice in the extraction, processing and transportation of primary minerals to minimise mineral waste,

2. The application of national and local standards for sustainable design and construction in proposed development,

3. The application of procurement policies which promote sustainable design and construction in proposed development, and

4. The maximum possible recovery of minerals from construction, demolition and excavation wastes produced at development or redevelopment sites. This will be promoted by on-site re-use/ recycling, or if not environmentally acceptable to do so, through re-use/ recycling at other nearby aggregate recycling facilities in proximity to the site.

Spatial Vision: Policy links to the delivery of themes A and F.
Strategic Objectives: Policy links to the delivery of objective 8.

Creating a network of aggregate recycling facilities

The importance of aggregate recycling

3.48 The sustainable re-use and recycling of CDE waste makes an important contribution to the Essex economy, ensures a balanced supply of aggregates for the County and helps reduce the amount of re-usable 'materials' from being wasted and disposed to landfill. It avoids unnecessary primary mineral extraction and the disturbance that this entails.

3.49 The EU Waste Framework Directive[4] requires waste management authorities to plan on the basis that over time there should be a significant reduction in the amount of CDE waste that is sent for disposal to landfill. This is a key policy driver behind increasing the proportion of CDE waste that must be re-used and recycled.

3.50 However, it is accepted that re-used, recycled and secondary aggregates cannot always remove the need for new land-won and marine dredged aggregates or new industrial mineral supplies.

3.51 The County Council as both the minerals and waste planning authority positively encourages the re-use and recycling of CDE wastes through its Development Plan and operational policies, including through this Plan and the separate Waste Local Plan. It is essential that this Plan enables and encourages the construction industry and minerals industry to provide enough investment in creating and maintaining an effective network of aggregate recycling facilities/ sites across the County to meet demand.

(4) EU Waste Framework Directive, 2008/98/EC, article 11, item2b

Recycled and secondary aggregates

3.52 Recycled aggregates are recovered from road, rail, construction and demolition sites and include damaged bricks, broken concrete, brickwork, masonry, spent rail ballast and tarmac. The materials are recycled to be used in new developments rather than being disposed of in landfill. Aggregate can be recycled to form new materials including concrete, brick, plasterboard and ceramic items.

3.53 Secondary aggregates are created as a by-product of a construction or industrial process. Examples include power station ash resulting from combustion (fly ash) which can be turned into bricks and cement, and slag from iron smelting which can be manufactured into mineral wool and subsequently used as a heating pipe insulator.

3.54 The 'National and Sub-National Guidelines for Aggregate Provision in England 2005-2020' (DCLG, June 2009) propose that the East of England region should provide 117 million tonnes (mt.) of alternative aggregate materials from 2005-2020 (at 7.8 mt. per year). This is equivalent to 31% of the region's total aggregate supply, so the re-use of recycled and secondary aggregate is a major feature of mineral supply.

3.55 Re-used and recycled aggregate forms only part of the CDE waste stream as discussed below.

Construction, demolition and excavation (CDE) waste

3.56 CDE waste is mainly inert material such as concrete, brick rubble and soils. Some of the harder materials can be recovered using mobile crushing plant and screeners, either on the development site itself or at a nearby permitted aggregate recycling site. Higher quality recycled aggregate can be produced on larger aggregate recycling sites where it is more economical to install such processing and washing equipment.

3.57 A small proportion of CDE waste comprises wood, plastics and metals. These can be dealt with at non-hazardous waste management facilities. Policies for these particular waste streams are not included in this Plan but will appear in the separate Waste Local Plan which is currently being prepared.

Construction Demolition and Excavation (CDE) waste recycling capacity in Essex

3.58 The available capacity of existing and dedicated inert waste treatment facilities in Essex/ Southend is estimated as being approximately 1.306 million tonnes per annum (mtpa) with transfer capacity of approximately 113,500 tonnes per annum. Of this total capacity approximately 60% is permanent capacity with the remaining 40% located in temporary facilities on existing mineral working sites.

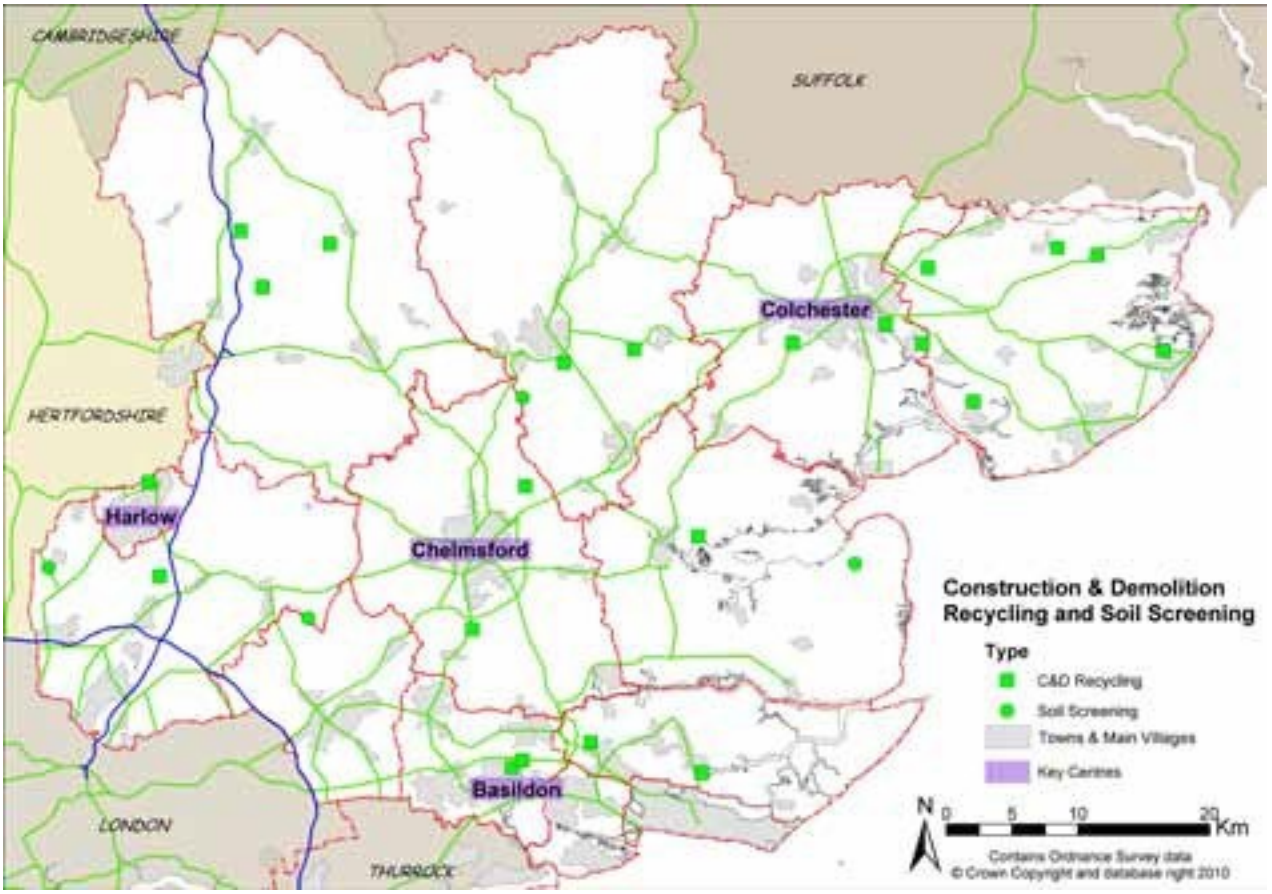
3.59 Unless new permissions are granted for additional CDE recycling facilities, there will be a reduction in this total permitted capacity in CDE recycling facilities during the period up to 2029 as temporary permissions expire.

3.60 A 'capacity gap' is estimated to arise during the plan period between the permitted capacity of CDE recycling facilities and the volume of CDE waste which must be recycled as temporary permissions expire. Although it is difficult to guage when this will occur it will be monitored. Inert waste treatment facilities with a capacity of approximately 1.5 million tonnes per annum are required in order to avoid the use of landfill altogether.

Creating and Safeguarding an effective County-wide aggregate recycling network

3.61 The distribution of existing aggregate recycling facilities in Essex is shown in Map 5 below. Some of these facilities are temporary, and many are smaller-scale enterprises only capable of producing a basic product. Most local councils in Essex have some existing aggregate recycling capacity with planning approval.

Map 5. Aggregate Recycling Facilities in Essex



3.62 New and improved facilities will be needed to achieve sufficient aggregates recycling capacity in the County up to 2029. Additionally there needs to be a major step change in the quality of the output of these aggregate recycling facilities available in Essex in order to:

- See a significant reduction in the amount of CDE waste sent to landfill,
- Increase the general availability of recycled aggregate products,
- Ensure high quality aggregate products that meet industry standards and protocols are produced in sufficient quantity,
- Provide for more certainty for both producers and consumers,
- Provide a geographic distribution of facilities to support the future strategic pattern of development and growth in Essex up to 2029, having regard to the short distances travelled by CDE waste and the availability of other facilities over the County's borders.

3.63 The opportunity for the provision of larger, more sophisticated aggregate recycling facilities is considered feasible in areas where the volume of CDE waste arisings will be greatest. This is considered to be where major regeneration/ redevelopment is planned and therefore proximity and appropriate road access to the 'Key Centres' - proposed to be the focus for the majority of the major development and growth in Essex up to 2029 - is important.

Future site requirements and approach to safeguarding

3.64 There are broadly three positive policy approaches to promoting a County network of aggregate recycling facilities:

- On-site re-use and recycling at redevelopment sites,
- The development of non-strategic recycling facilities,
- The development of Strategic Aggregate Recycling Sites

On-site re-use and recycling at redevelopment sites

3.65 The use of mobile crushing and screening plant is discussed earlier in relation to Policy S4: Reducing the Use of Mineral Resources, above.

Non-strategic aggregate recycling facilities

3.66 Non-strategic aggregate recycling sites have a capacity of less than 100,000 tonnes per annum. Their recycling activities typically take place in the open air as smaller-scale operations which are static, dedicated, and with permanent or temporary planning consent. The majority of these temporary sites are located within existing mineral workings. They are less able to generate the additional capital necessary to provide washing plant or to locate plant inside buildings.

3.67 This Plan does not intend to safeguard existing non-strategic aggregate recycling facilities in the County. These are very disparate in terms of their location, operational plant and activities, and relationship with neighbouring land-uses, including the main road network. Therefore a general safeguarding policy for all such facilities across the County in the Plan would be inappropriate.

3.68 Any proposals for their expansion, removal or redevelopment for other land-uses is best dealt with in on a case by case basis having regard to Local Plan Reviews or the Development Management process. Detailed local circumstances can then be taken into account with each proposal considered in relation to its individual merits.

Strategic Aggregate Recycling Sites (SARS)

3.69 Strategic Aggregate Recycling Sites (SARS) are static with a capacity to recycle at least 100,000 tonnes per annum as a minimum, and have the following characteristics:

- A permanent and dedicated facility, or a temporary dedicated facility with permission which extends to the end of the plan-period,
- Of sufficient size to accommodate a washing plant, in addition to a crushing and screening plant, with dedicated storage areas for feed waste, processing plant and stockpiles of raw and processed material,
- Located in proximity to Key Centres for development and change in the County, which are expected to generate the majority of future CDE waste arisings during the plan-period, and be the focus of the Essex market for recycled aggregate products,
- Compatible with existing and permitted neighbouring land-uses so there are no issues of noise, vibration, pollution, disturbance, loss of amenity or serious adverse environmental impact,
- With good road connections to the main road network in the County, and/ or with access to rail or waterborne transport, for the receipt of CDE waste and subsequent distribution of recycled products.

3.70 There are three existing SARS operating in the County, located at:

- Purdey's Industrial Estate (in Rochford and well placed to serve south-east Essex),
- Bulls Lodge Quarry (temporary permission in Boreham and well placed to serve central Essex), and,
- Stanway Quarry (temporary permission in Colchester and well placed to serve north-east Essex).

3.71 The continuation of a temporary permission would be subject to a planning application being considered within the context of the criteria set out in policy S5: Creating and Safeguarding a Network of Aggregate Recycling Facilities.

3.72 SARS should have a long term status or permanence during the plan-period, as either permanent permissions or long term temporary permission within mineral workings and occupy suitable sites/ buildings in both planning and transport terms. It is often difficult in planning terms to find suitable sites for these activities should they cease and have to be replaced with capacity elsewhere. They make a significant contribution to aggregate recycling capacity in the County and the availability of quality recycled products. Therefore, the Plan intends that they should be positively safeguarded to protect their current purpose wherever possible. Redevelopment for non-mineral development on safeguarded sites should only be approved in exceptional circumstances.

3.73 Having regard to the implementation of CDE/ aggregate recycling targets and the emerging 'capacity gap' mentioned above, the background evidence points to a need for the provision of more SARS in the County during the plan-period to 2029. This Plan considers that SARS would be most appropriately located:

- Within permanent waste management sites,
- In commercial areas used for general industrial or storage purposes (subject to compatibility with existing neighbouring land-uses),
- On previously developed land,
- At mineral extraction sites (on a temporary basis but which extends to the end of the plan period),
- At landfill sites (on a temporary basis but which extends to the end of the plan period),
- Within major planned development areas.

Plan-led approach

3.74 The Waste Local Plan will be setting targets for CDE waste diversion and the evidence base is still being developed. It would therefore be inappropriate for the Plan to set a numerical policy target for aggregate recycling capacity in the County during the plan-period of this MLP, or to identify any site-specific proposals for new aggregate recycling facilities. The broad approach of the Plan is to:

- Safeguard the County's existing network of SARS from redevelopment for non-minerals development to maintain their aggregate recycling capacity into the future, and
- Set out positive policy criteria to enable developers to bring forward proposals for new SARS in appropriate locations in response to the market.

3.75 Proposals should not cause unacceptable impacts or harm to neighbouring land-uses by virtue of noise, vibration, dust, light pollution, or heavy road traffic. Given the volume of material being handled and the heavy vehicle traffic associated with this activity, proposals would need to be well located in relation to the main road network to minimise road traffic impacts.

Policy S5- Creating a network of aggregate recycling facilities

The increased production and supply of recycled/ secondary aggregates in the County is supported to reduce reliance on land-won and marine-won primary aggregates. The County's existing network of aggregate recycling facilities shall be maintained and expanded wherever appropriate. In addition:

1. Existing Strategic Aggregate Recycling Sites (SARS) identified on the Policies Map and defined in the map in Appendix 3 will be safeguarded from development that might result in their closure earlier than their permission. There is a general presumption that existing SARS should remain in operation for the life of the permission.

2. The Local Planning Authority shall consult the Minerals Planning Authority for its views and take them into account before determining development proposals that would compromise the continued operation and potential of an existing SARS.

3. Proposals for new aggregate recycling facilities, whether non-strategic or in the form of SARS, should be located on the main road network in proximity to the Key Centres of Basildon, Chelmsford, Colchester, and Harlow. Such proposals shall be permitted in the following preferred locations, provided they do not cause unacceptable highway harm, are environmentally acceptable and in accordance with other policies in the Development Plan for Essex:

a) on major demolition and construction sites (on a temporary basis);

b) within permanent waste management sites;

c) in commercial areas used for general industrial or storage purposes, subject to compatibility with neighbouring land-uses;

d) on appropriate previously developed land;

e) on current mineral workings and landfill sites provided the development does not unduly prejudice the agreed restoration timescale for the site and the use ceases prior to the completion of the site; and

f) within major allocated or permitted development areas (as set out in the Development Plan for Essex).

Spatial Vision: Policy links to the delivery of theme F.
Strategic Objectives: Policy links to the delivery of objective 8.

Provision of primary minerals

3.76 The MPA is required to plan for a steady and adequate supply of aggregates. This Plan provides the framework for identifying new mineral sites to meet these requirements and the landbank provides the mechanisms for securing and maintaining mineral supplies at the County level. They work by reflecting the time taken to obtain planning permissions and bring sites into production. The extent of the landbank provides a useful indicator for deciding when new permissions for extraction are required. The approach to future SARS provision across Essex will also need to have regard to the aims and objectives of any Enterprise Zone and supporting Local Development Orders which facilitate the delivery of sector focused industries.

National policy on landbanks

3.77 A 'landbank' is a stock of planning permissions for the winning and working of minerals into the future. The size of a landbank is measured in terms of a number of years. It is calculated by working out:

- The total capacity (in tonnes) of all permitted mineral reserves with planning permission, and then,
- Dividing this total capacity by the annual rate of mineral supply provision (in tonnes per year) proposed in this Plan for the plan-period, and then,
- Expressing this calculated figure in terms of years' equivalent (e.g., the landbank is 8.4 years).

3.78 Policies providing for the maintenance of sufficient landbanks are an important feature of this Plan. They enable the minerals industry to respond to changes in market demand and also provide a secure long-term, steady and adequate supply of permitted mineral reserves to justify capital investment in plant, machinery and manufacturing capacity. They also enable the wider planning and environmental consequences of long term provision to be considered in an orderly, timely and effective way through periodic reviews of this Plan.

3.79 The NPPF provides guidance on the minimum length of mineral landbanks, as follows:

3.80 Aggregate minerals

- At least a seven year landbank for sand and gravel, ensuring that the capacity of operations to supply a wide range of materials is not compromised. Longer periods may be appropriate to take account of the need to supply a range of aggregates, locations of permitted reserves relative to markets and productive capacity of permitted sites.
- Ensuring that large landbanks bound up in very few sites do not stifle market competition.

3.81 Industrial minerals

- At least ten years for individual silica sand sites; or at least fifteen years for silica sand sites where significant new capital is required.
- At least 25 years for brick clay.
- Where relevant, take account of the need for the provision of brick clay from a number of different sources to enable appropriate blends to be made.

The Plan's approach to landbanks

3.82 The Plan maintains a single County-wide landbank of at least seven years for sand and gravel based on plan provision up to 2029 and also site-specific landbanks of at least ten years for silica sand (at Martells Quarry, Park Farm, Ardleigh) and at least 25 years for brick clay (to serve both Bulmer Brickfield and Marks Tey, respectively). It is considered unnecessary and impractical to maintain separate landbanks for County sub-areas or to distinguish between building sand and concreting aggregates, although further monitoring of building sand will be undertaken to establish whether this situation needs to be reviewed.

3.83 As of 31 December 2011, the combined Essex and Thurrock updated landbank for sand and gravel was 8.3 years. Planning permissions secured on the Preferred Sites identified in this Plan will increase the permitted landbank which otherwise decreases through sales of the aggregate.

3.84 The Plan will be monitored annually and regularly reviewed to ensure that the Essex sand and gravel landbank is maintained to at least seven years throughout the plan period to 2029. This will be monitored through the Annual Monitoring Report and annual Local Aggregate Assessment, which includes a rolling ten year average assessment of sand and gravel sales. Where the landbank falls below seven years there will be an opportunity to bring Reserve Sites forward for extraction. In addition a five yearly plan review will be undertaken as part of a "plan, monitor, and manage" approach, or if the landbank shows signs of falling below the seven years' requirement, whichever comes sooner (see policy IMR1). The proposed annual monitoring and the commitment to a five yearly Plan review provides sufficient flexibility in the Plan, removing the need to plan for further additional resources at the end of the plan period which may potentially amount to over-provision contrary to the Minerals Supply Hierarchy.

National guidelines on aggregate supply provision

3.85 The NPPF requires the MPA to plan for a steady and adequate supply of aggregates by:

- Preparing an annual 'Local Aggregate Assessment' based on a rolling average of 10 years sales data and other relevant local information, and an assessment of all supply options (including marine dredged, secondary and recycled sources),
- Taking part in the operation of the relevant Aggregate Working Party (East of England AWP) and taking the advice of the Working Party into account when preparing the Local Aggregate Assessment,
- Making provision for land-won and other elements of the Local Aggregate Assessment in the Mineral Local Plan, having taken into account the advice of the Aggregate Working Party and the National Aggregate Coordinating Group,
- Taking account of the published National and Sub-National Guidelines on future provision, and using this guideline when planning for future aggregate demand and supply.

Sub-National Aggregate Apportionment

3.86 The 'National and Sub-National Guidelines for Aggregates Provision in England 2005-2020' (DCLG, June 2009) set out how much aggregate should be provided for in each of the English sub-national areas. For the East of England the following million tonnes to 2020 are required.

Table 3. Guidelines for Sub-National Apportionment

Guidelines for land-won production			Key assumptions:	
Land-won sand & gravel	Land-won crushed rock	Marine sand & gravel	Alternative materials	Net imports to England
236	8	14	117	7

Notes:
1. Marine dredged sand and gravel is to be supplied to the extent that environmentally acceptable sources can be identified and exploited, within the principles of sustainable development.

2. Alternative materials include recycled construction and demolition waste.

3.87 These sub-national supply guidelines for land-won sand & gravel were apportioned to the individual mineral planning authorities within the East of England. This process was completed by the former Regional Planning Body (the East of England Regional Assembly) on the advice of the East of England Aggregate Working Party (EEAWP). The latter comprises representatives from each of the mineral planning authorities (MPAs) in the East of England, including Essex, as well as industry representatives.

3.88 There is no EEAWP apportionment available for either land-won crushed rock or alternative materials. The crushed rock resource in the East of England is very limited and is not of sufficient high quality for it to be economic to transport any significant distance. As such, it is not considered a truly regional resource and Essex does not have any local resource of sufficient economic significance (see Part 3, Spatial Portrait). The EEAWP was unable to apportion 'alternative materials' within the region due in part to the limited data available.

3.89 The Greater Essex land-won sand and gravel provision figure of 4.45 mtpa has been divided as follows:

- 4.31 mtpa to Essex, and,
- 0.14 mtpa to Thurrock.

3.90 For information, Southend-on-Sea is unable to make a contribution to the Greater Essex mineral supply because of its tightly defined and built-up administrative area and lack of mineral resource.

3.91 In summary, this sub-national apportionment process has been approved by the EEAWP and the former East of England Regional Assembly (March 2010), with the appropriate Greater Essex MPA shares having been subsequently agreed between Essex County Council and Thurrock Council.

Land Won Sand and Gravel Sales

3.92 Information on aggregate sales is collected on an annual basis for all MPAs in the East of England by the AWP, and this information is included in individual MPA Annual Monitoring Reports and Local Aggregate Assessments.

3.93 The Greater Essex Local Aggregate Assessment includes the latest ten year rolling average of aggregate sales for the period 2002-2011, recorded as 3.76 mtpa for Greater Essex (Essex, Southend-on-Sea and Thurrock. This is below the 3.9mtpa recorded across Greater Essex for the period 2001-2010, and below the Greater Essex apportionment figure of 4.45 mtpa.

3.94 Between 2001-2007 when the economy was more buoyant, the sales of sand and gravel regularly exceeded 4mtpa, Lower figures have been reported from 2008 onwards, reflecting the economic recession and the consequent fall in construction activity, and this has acted to reduce the ten-year rolling average figure. Paragraph 174 of the NPPF makes it clear the Plan should 'facilitate development throughout the economic cycle.' As such, basing future mineral provision on recessionary levels of sales would in effect be planning for a continuation of the current recession and this would be contrary to the national growth agenda that this Plan must support.

Plan provision for future sand and gravel extraction

3.95 This Plan has therefore been prepared to provide 4.31mtpa of sand and gravel over the plan-period, to be provided by existing sites with permission as well as Preferred and Reserve Sites proposed by the Plan. The 4.31mtpa provision figure for the County is consistent with the sub-national aggregate apportionment figure and with the current stance of the East of England Aggregates Working Party. Although as stated recent sales figures in Essex/ Thurrock combined are below this plan provision, current sales reflect a recessionary period in the national economy and is untypical in the context of historic performance in recent decades. In addition, taking a longer term view to 2029, it is anticipated that the UK economy will recover with higher sales volumes needing to be facilitated.

3.96 The numerical difference between the sub-regional apportionment figure and the sales figures provides for flexibility in the Plan. The provision allocated through both Preferred and Reserve sites meets the 4.31 mtpa sub-regional apportionment figure. The provision for solely Preferred sites is based on 10 year average sales. Should sales figures 'bounce back' to higher volumes closer to recent pre-recessionary experience, then this is addressed in the Plan through the ability to bring forward the allocated Reserve sites while continuing to provide certainty to local communities and the minerals industry about where minerals development will take place.

3.97 The Essex provision figure of 4.31 mtpa for sand and gravel equates to a total plan provision of 77.58 mt over the eighteen year plan-period of 2012-2029 inclusive (excluding existing permissions). After deductions for existing permitted reserves at the base date (36.034 million tonnes at 31 Dec. 2011 for Essex only reserves and excluding estimated reserves of 0.98mt for Thurrock) and deducting new permissions granted since 1 January 2012 (0.88mt from 2 sites) the planning requirement for primary extraction from new site allocation in Essex is 40.67 million tonnes.

Therefore the Plan needs to identify an additional 40.67 million tonnes from Preferred Sites for Land Won Sand and Gravel.

3.98 Part Four of this Plan identifies the Preferred and Reserve Sites for sand and gravel extraction in the County on a site-specific basis which will achieve this overall scale of provision up to 2029.

Self-sufficiency of the County

3.99 The majority of sand and gravel extracted within the County will serve the local Essex market. The Local Aggregate Assessment estimates the proportion at about 78% and this is considered unlikely to significantly change over the long-term should Essex continue to be able to rely on current rates of import. The main economic drivers of future production will be the mineral demands created by major development and new infrastructure projects in Essex, and the ongoing need for building and infrastructure maintenance and repair.

3.100 The majority of future development will be focused spatially to supply a dispersed market having regard to the national growth areas of South Essex Thames Gateway and Haven Gateway (Essex), and the Key Centres of Basildon, Chelmsford, Colchester and Harlow. There are also Key Centres in the neighbouring areas of Southend-on-Sea and Thurrock which will experience significant growth and development. The Spatial Portrait identifies some of the major infrastructure projects which may also create a demand for minerals.

Links with neighbours

3.101 Essex's strategic location to the north-east of London means that there will always be some market demand for the County's mineral resources from neighbouring areas. The Local Aggregate Assessment concluded that 22% of sand & gravel extracted within Essex is exported outside of the greater Essex area, 14% of which is exported outside the East of England with London likely being the largest consumer. Essex also imported approximately 20% of its sand and gravel requirements (both land won and marine sourced) and as such it is important that our current links can be maintained.

3.102 The Greater London conurbation is highly urbanised and relies on imported minerals for its development, growth and regeneration. The adopted London Plan (2011) confirms the capital will continue to rely on imported aggregates delivered by sustainable transport modes (rail and water). Inter-regional movements have already been accounted for in the sand and gravel provision made in this Plan.

3.103 The London Aggregate Working Party Annual Monitoring Report 2011 states "London continues to be heavily dependent on marine aggregate supplies to meet its aggregate requirements". The Local Aggregate Assessment and data received from the British Geological Survey will allow for the monitoring of sales of sand and gravel within Essex to ascertain whether sales begin to reduce in light of the above.

3.104 The members of the East of England Aggregate Working Party, of which Essex and all the other Mineral Planning Authorities within the former East of England region are a part, have agreed to maintain plan provision to the extent of the annual apportionment originally presented in the East of England Regional Spatial Strategy. Since the annual apportionment was set to equate to local need, there is no requirement for Essex County Council to make any specific provision to serve any neighbouring area. Nevertheless, all MPAs recognise that there will be some cross-boundary movement of mineral supply as this is the nature of the market.

MPA consideration of non-Preferred Sites

3.105 To ensure future sand and gravel extraction is clearly focused on the Spatial Strategy and the identified Preferred and Reserve Sites in this Plan, other proposals for sand and gravel extraction at locations situated outside of the areas identified for future working will normally be resisted by the Mineral Planning Authority (MPA). There may, however, be circumstances where an 'over-riding justification' and/ or over-riding benefit for mineral development can be demonstrated.

3.106 Proposals for mineral extraction on these 'non-Preferred Sites' may occur in relation to:

- Agricultural irrigation reservoirs – where mineral is extracted and exported to create the reservoir landform,
- Borrow pits – where extraction takes place over a limited period for the exclusive use of a specific construction project such as for a specific road scheme,
- Prior extraction to prevent mineral sterilisation – this may be required on occasions where significant development takes place (on a site of over 5 hectares for sand and gravel) and where a workable mineral resource could otherwise be permanently lost through sterilisation.

3.107 Such proposals will be considered on their own individual merits and the MPA will pay particular regard to the justification/ need that is cited by applicants when determining planning applications. The MPA must be satisfied that there are exceptional reasons for permitting such applications, after having considered all the relevant circumstances so as not to prejudice the overall strategy of the document. All proposals will be considered against policies in the Development Plan.

3.108 Where proposals are put forward on the basis of fulfilling some form of 'mineral need' for minerals extraction, then the MPA will always require consideration of the whole of the County for the purposes of estimating the adequacy of the landbank or the sufficiency of the Plan's provision. The MPA does not consider that information about mineral supply in specific County sub-areas, or the individual commercial business need of a mineral operator to continue production at a particular mineral extraction site, to be relevant or material to its decisions in respect of non-Preferred Sites.

3.109 No allowance for non-Preferred Sites coming forward has been made in determining the Plan's provision up to 2029. This is because the location and timing of these sites cannot be predicted, and they would therefore not contribute to meeting the spatial strategy which is central to this Plan.

3.110 A plan-led approach excluding such an allowance and identifying Preferred and Reserve Sites, provides greater certainty for local communities and the minerals industry about where minerals development will take place over the long-term. In any event, the Plan will be reviewed at regular intervals and as such the emergence of any non-Preferred Sites can be taken account as the Plan is updated and rolled-forward over a further time period.

Policy S6- Provision for sand and gravel extraction

The Mineral Planning Authority shall endeavour to ensure reserves of land won sand and gravel are available until 2029, sufficient for at least 7 years extraction or such other period as set out in national policy.

The working of Reserve sites will only be supported if the landbank with respect to the overall requirement of 4.31mtpa is below 7 years.

Mineral extraction outside Preferred or Reserve Sites will be resisted by the Mineral Planning Authority unless the applicant can demonstrate:

a. An overriding justification and/ or overriding benefit for the proposed extraction, and,

b. The scale of the extraction is no more than the minimum essential for the purpose of the proposal, and,

c. The proposal is environmentally suitable, sustainable, and consistent with the relevant policies set out in the Development Plan.

Spatial Vision: Policy links to the delivery of theme B.
Strategic Objectives: Policy links to the delivery of objectives 10.

Plan provision for other minerals

Silica sand

3.111 Silica sand is extracted at one site in Essex at Martells Quarry from the raw material in Ardleigh. Permissions have been granted at the site providing for a proportionate split between silica sand (54%) and aggregate (46%). The annual throughput of this site for silica sand is assumed to be 45,000 tonnes per annum, a calculation based on the proportion of the silica sand resource and permitted plant capacity during the plan-period to 2029.

3.112 The NPPF requires the maintenance of at least a ten year landbank to safeguard investment and continued production at existing silica sand extraction sites. After making allowance for the already permitted reserves at Martells Quarry, more resources should be identified to maintain the landbank. This would be in the form of a site extension to provide for an additional 390,000 tonnes of total capacity for silica sand. Therefore the Plan needs to identify an additional 0.39 million tonnes from Preferred Sites for Silica Sand.

The Plan needs to identify an additional 0.39 million tonnes from Preferred Sites for Silica Sand

Brick clay

3.113 Brick clay is extracted at two sites in the County, namely Bulmer Brickfield and Marks Tey. It is important that an adequate and steady supply of brick making clay remains available to support development in the County and preserve its heritage assets.

3.114 The NPPF requires the maintenance of at least a 25 year landbank at both sites. The operators at Marks Tey have confirmed that there is already enough permitted capacity on their site to provide for the necessary landbank during the plan-period.

3.115 Both Marks Tey and Bulmer Brickworks have previously been granted permissions for sufficient provision to achieve the required landbank. As such, no further provision is required over the period covered by this Plan.

Brickearth

3.116 There is no extraction of brickearth within the County at the present time but there is no compelling reason why it could not be extracted economically at some point in the future. The Plan does not make any site-specific allocations for this mineral.

Chalk

3.117 Chalk is currently extracted at only one site in Essex, in the form of white chalk at Newport Quarry, for agricultural and pharmaceutical purposes. There is only limited interest in chalk extraction in the County and there is no national policy requirement to maintain a landbank for this type of mineral. The Plan does not make any site-specific proposals for this mineral to be extracted.

3.118 Although this existing chalk extraction site in Essex is considered to be sufficient to meet current and future demand, new proposals for the small-scale extraction of chalk may still be promoted during the plan-period. Therefore a policy framework that allows planning applications to be considered on their individual merits is still necessary.

Conclusion

3.119 Proposals for the extraction of other minerals in the County – silica sand, brick clay, brickearth, and chalk – may come forward on other ‘non-identified sites’ during the plan period. Such proposals will be considered on their own individual merits, having regard to the economic need for the mineral concerned and the relevant policies in the Development Plan.

Policy S7- Provision for industrial minerals

Any proposals for other minerals in the County will be considered as follows:

Silica Sand Extraction:
Provision is made for a site extension at Martells Quarry, Ardleigh to maintain an appropriate minerals landbank for silica sand of at least ten years during the plan-period as defined in Policy P2

Brick Clay Extraction:
A minerals landbank of at least 25 years of brick-making clay will be maintained at the following brickworks:

- Marks Tey and Bulmer through the extraction of remaining permitted reserves.

The extracted brick-making clay from Bulmer Brickworks and Marks Tey respectively should be used to support the brickworks in that locality only, as defined on the Policies Map.

Chalk Extraction:
The small-scale extraction of chalk will only be supported for agricultural and pharmaceutical uses at Newport Quarry as identified within the Policies Map. Extraction of chalk for other uses, such as aggregate, fill material or for engineering will not be supported.

Proposals for the extraction of other minerals on non-Preferred Sites will be permitted where:

- The reserves comprising the landbank are insufficient and/ or there is some other over-riding justification or benefit for the release of the site, and
- The proposal would be environmentally acceptable.

Spatial Vision: Policy links to the delivery of theme B.
Strategic Objectives: Policy links to the delivery of objectives 10.

Safeguarding mineral resources and mineral reserves and avoiding their sterilisation

Minerals of National and Local Importance in Essex

3.120 Minerals are a finite natural resource which must be used prudently and conserved so that there are adequate resources for future generations. Known locations of mineral resources of national and local importance need to be protected and safeguarded to ensure the long-term security of minerals supply and to ensure their presence is factored into decisions about future land-use when proposals for other development arise.

3.121 The British Geological Survey (BGS) Mineral Resource Maps provide the best available geological and resource based information on the broad extent of minerals resources in Essex. Where BGS survey work is not available, the mineral resource has been inferred from other evidence held by the County Council. This work has identified sand and gravel, silica sand, chalk, brickearth and brick clay as being minerals requiring safeguarding in Essex.

Sterilisation of Minerals

3.122 'Sterilisation' is the term used when development or land-use changes take place which permanently prevent the extraction of mineral resources from the ground. By protecting mineral resources from unnecessary sterilisation, the Minerals Planning Authority can ensure that:

- Mineral resources remain available to meet the needs of future generations,
- Local flexibility is retained to identify new extraction sites in areas which have the least impact on people, communities and the environment,
- There is the opportunity to consider the merits of prior extraction of the minerals where this is environmentally and socially acceptable, and practical to do so.

Mineral Safeguarding Areas (MSAs)

3.123 'Safeguarding' is the process used in the planning system to ensure the protection of mineral resources from the risk of sterilisation.

3.124 The NPPF requires Minerals Planning Authorities to define MSAs and adopt appropriate policies within their local plans. This is so that known locations of specific minerals are not needlessly sterilised by other forms of development whilst acknowledging that this does not create a presumption that the resources defined will ever be worked.

3.125 Following consultation with the mineral industry, the Coal Authority, English Heritage, British Geological Survey, neighbouring MPAs and other stakeholders, the following Mineral Safeguarding Areas and consultation thresholds have been established:

Table 4. Definitions of Mineral Safeguarding Areas

Mineral Type	Geographic Definition of MSA Extent	Consultation Threshold
Sand & Gravel (including silica sand)	All glacial sand and gravel resources, glaciofluvial sand and gravel resources and river terrace deposits as identified from BGS mapping and other supplementary sources of evidence.	All potential developments greater than five hectares.
Brickearth	The same boundary for the Minerals Consultation Area as identified in the Essex Minerals Local Plan (adopted Brickearth January 1997) has been used, with any areas already known to have been worked out omitted.	All potential developments greater than one dwelling.
Brick Clay	These deposits are very localised and have been identified from BGS mapping.	All potential developments greater than one dwelling.
Chalk	Only higher purity (upper chalk) is currently worked, and only one mineral resource area has been identified (predominantly in Uttlesford district).	All potential developments greater than three hectares.

3.126 In this Plan, the spatial location and broad extent of MSAs in Essex is shown on the Policies Map. District, borough, and city planning authorities will in turn include these MSAs on their own Policies Maps.

3.127 If it proves necessary for development to take place within an MSA, then the presence of mineral resources and the potential for prior extraction of minerals should be considered. Where considered appropriate, prior extraction should be undertaken before development takes place.

3.128 Further to the thresholds expressed above, additional limits are placed on the consultation process as some types of development are of little significance to minerals planning. Appendix 5 sets out the types of planning application or proposal within MSAs for which it is not appropriate to consult the County Council. It follows that consultation should take place in respect of all development proposals in MSAs which are not defined as being excluded by the Appendix.

Mineral Consultation Areas

3.129 Minerals development may create impacts on their immediate surroundings and local communities through, for example, dust or noise emissions and vehicle movements. Development that is sensitive to such impacts and therefore potentially incompatible in close proximity to minerals development can include facilities such as hospitals and clinics, retirement homes, residential areas, schools, offices, horticultural production, food retailing and certain types of industry such as high-tech, painting and furnishing, and food processing. The Technical Guidance accompanying the NPPF provides examples of high, medium, and low sensitivity land-uses.

3.130 It is necessary to safeguard existing mineral workings, Preferred and Reserve Sites to prevent the possibility of new incompatible neighbours being established and ultimately restricting their activities. Incompatible/ sensitive development should not be located in such close proximity that it puts constraints or limits upon current or future uses for mineral production. Proposed development (even a single dwelling) on the edge of, or in proximity to, a mineral site or haul road can prevent part of that site from being worked. Compromising the planned working of a mineral can sterilise the resource and prejudice the steady supply of aggregate production within the Plan Area.

3.131 The following are also defined as 'safeguarded sites' for the purposes of protecting mineral workings and existing mineral reserves:

- mineral extraction sites and their associated facilities with planning permission that are currently in active mineral use
- mineral extraction sites with unimplemented planning permission for minerals extraction (including 'dormant' sites with extant planning permission for mineral extraction that have remained unimplemented for some years)
- Preferred and Reserve Sites proposed in this Plan for future mineral extraction

3.132 Mineral Consultation Areas (MCAs) apply to the safeguarded site itself and extend for a distance of 250 metres outwards from the site boundary of each of these safeguarded sites. MCAs ensure that, should mineral extraction have to take place within and up to the site boundary, that development proposed on adjacent land beyond the site boundary would not prevent or compromise the possibility of mineral resources being extracted in future from land within the site itself. The location of the MCAs for these safeguarded sites is shown on the Policies Map.

3.133 The Mineral Planning Authority should be consulted by Essex district/ borough/ city councils about all development proposals within these MCAs not excluded in Appendix 5, as even minor development occurring within such MCAs may have the potential to significantly impact upon the future working of mineral resources.

Consultation between district, borough, and city planning authorities and the Minerals Planning Authority

3.134 Planning law requires that applications for planning permission must be determined in accordance with the Development Plan unless material considerations indicate otherwise.

3.135 Local government in Essex operates within a two-tier structure and it is important that there is policy consistency between the tiers. MSAs and MCAs provide a means to ensure that appropriate policy dialogue takes place between Essex district/ borough/ city councils and the Minerals Planning Authority when local planning decisions are made.

3.136 Essex borough/ district/ city councils are responsible for the spatial planning of most land-uses within their areas. In doing so, they should not include policies and proposals in their own Local Plans which would require development in MSAs, unless there has been effective prior consultation with the Mineral Planning Authority.

3.137 When consulted on development proposals within MSAs or MCAs, the Mineral Planning Authority will be able to provide the Local Planning Authority with its views regarding whether it is considered that a proposed development would cause unacceptable sterilisation of a proven mineral resource within a MSA, or would prevent or prejudice the operation of a safeguarded mineral site. In some circumstances, a strategic objection may be raised to the proposed development. This process would be done on a case by case basis with all proposals being considered on their own individual merits.

3.138 In such instances, where the sterilisation of a mineral resource is at stake, it would be necessary for the development proposal to include a mineral resource assessment to enable the economic importance of the resource to be evaluated.

3.139 Each decision would take into account factors such as the mineral importance of the MSA resource, the particular use of a safeguarded mineral site, the nature of the proposed development, and the compatibility or degree of conflict. Any mitigation which could address any adverse impacts would also be relevant.

3.140 Where a proposal is made for development within a MSA or MCA identified in this Plan, then the district/ borough/ city council as the local planning authority must formally consult the County Council for its views before making a planning decision about the proposal, and must subsequently take these views into account.

3.141 As previously stated, for clarity and consistency, Essex district/ borough/ city councils should identify any safeguarded sites on their own Policies Map for their relevant administrative area.

Policy S8- Safeguarding mineral resources and mineral reserves

By applying Mineral Safeguarding Areas (MSAs) and/ or Mineral Consultation Areas (MCAs), the Mineral Planning Authority will safeguard mineral resources of national and local importance from surface development that would sterilise a significant economic resource or prejudice the effective working of a permitted mineral reserve, Preferred or Reserve Site allocation within the Minerals Local Plan. The Minerals Planning Authority shall be consulted, and its views taken into account, on proposed developments within MSAs and MCAs except for the excluded development identified in Appendix 5.

Mineral Safeguarding Areas

Mineral Safeguarding Areas are designated for mineral deposits of sand and gravel, silica sand, chalk, brickearth and brick clay considered to be of national and local importance, as defined on the Policies Map.

The Mineral Planning Authority shall be consulted on:

a) all planning applications for development on a site located within an MSA that is 5ha or more for sand and gravel, 3ha or more for chalk and greater than 1 dwelling for brickearth or brick clay; and

b) any land-use policy, proposal or allocation relating to land within an MSA being considered by the Local Planning Authority for possible development as part of preparing a Local Plan (with regard to the above thresholds).

Non-mineral proposals that exceed these thresholds shall be supported by a minerals resource assessment to establish the existence or otherwise of a mineral resource of economic importance. If, in the opinion of the Local Planning Authority, surface development should be permitted, consideration shall be given to the prior extraction of existing minerals.

Mineral Consultation Areas

MCAs are designated within and up to an area of 250 metres from each safeguarded permitted minerals development and Preferred and Reserve Site allocation as shown on the Policies Map. The Mineral Planning Authority shall be consulted on:

a) Any planning application for development on a site located within an MCA except for the excluded development identified in Appendix 5,

b) Any land-use policy, proposal or allocation relating to land within an MCA that is being considered as part of preparing a Local Plan

Proposals which would unnecessarily sterilise mineral resources or conflict with the effective workings of permitted minerals development, Preferred or Reserve Mineral Site allocation shall be opposed.

Spatial Vision: Policy links to the delivery of theme G.
Strategic Objectives: Policy links to the delivery of objective 9.

Mineral transhipment sites and secondary processing facilities

3.142 The National Planning Policy Framework (March 2012) states that MPAs when preparing their local plans should include policies to safeguard:

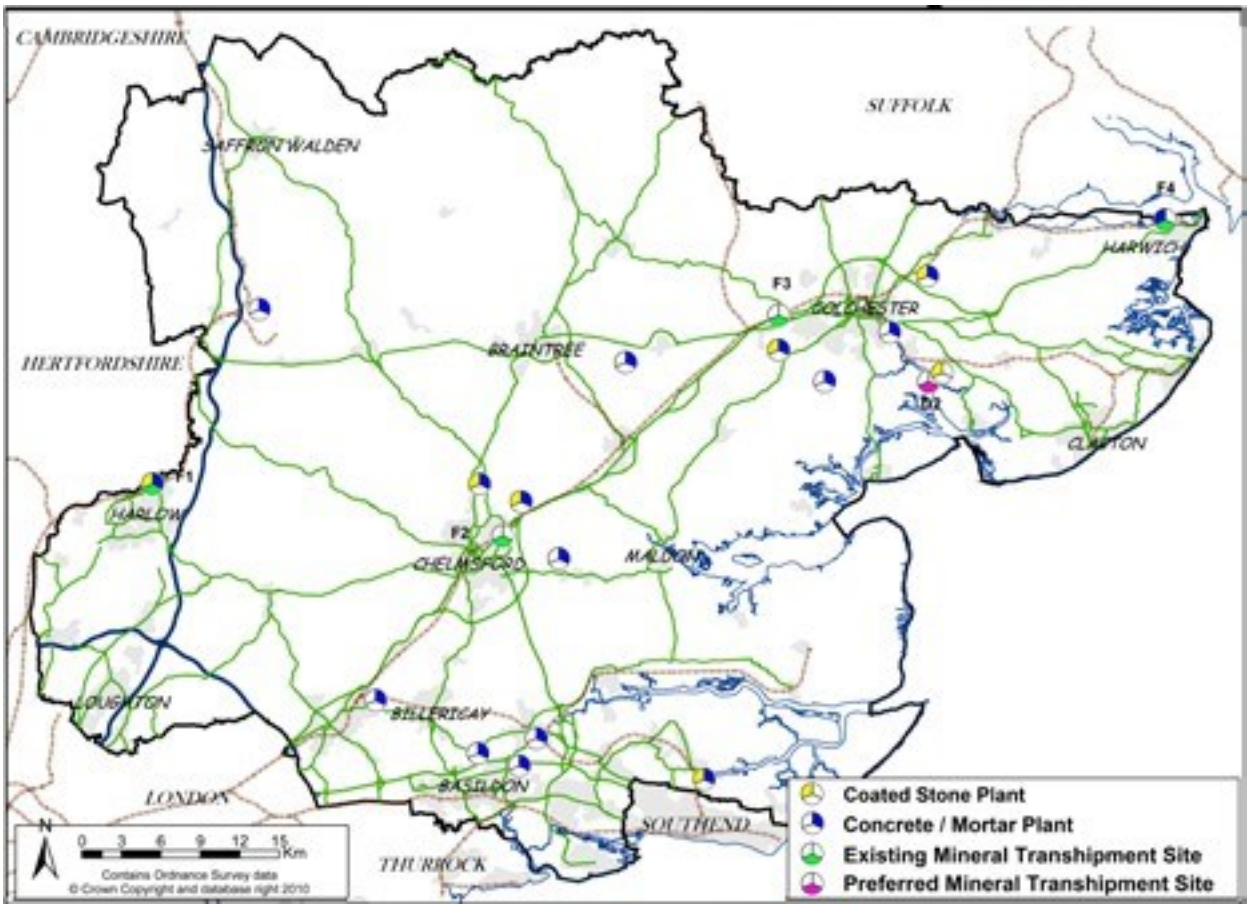
- Existing, planned and potential rail heads, rail links to quarries, wharfage and associated storage, handling and processing facilities for the bulk transport by rail, sea or inland waterways of minerals, including recycled, secondary and marine-dredged materials, and
- Existing, planned and potential sites for concrete batching, the manufacture of coated materials and other concrete products, and the handling, processing and distribution of recycled and secondary aggregate material.

Mineral transhipment sites

3.143 Essex has no deposits of hard rock, so it relies on imported supplies to serve the County's needs. Most imported mineral comes from the East Midlands and South West regions, and the existing mineral infrastructure which makes this importation possible is a vital feature of the County's mineral supply network. The MPA has established, as far as it is able, that these imported supplies will continue to arrive through the plan period.

3.144 A proportion of the sand and gravel produced in Essex will continue to be exported for use elsewhere, particularly in London, the East of England and the South East. Given the proximity of London – a large consumer with limited indigenous supplies of its own – aggregates produced in Essex will serve this market and beyond for the foreseeable future. This factor is accounted for in the National and Sub-National Guidelines for Aggregate Provision in England 2005-2020.

Map 6. Mineral transhipment sites and coated stone plants in Essex



3.145 Mineral transhipment sites provide for the movement of minerals over long distances by sustainable transport modes and therefore rail depots and marine wharves are vital strategic mineral facilities. There are mineral transhipment sites at the following locations:

- Chelmsford Rail Depot – used for both the import of limestone and the export of sand and gravel
- Harlow Mill Rail Station – used for both the import of limestone and the export of sand and gravel
- Marks Tey Rail Depot – used for the export of sand and gravel
- Ballast Quay, Fingringhoe – a marine wharf used for the export of sand and gravel originating from Fingringhoe quarry only to the London market and beyond.

3.146 It would be inappropriate to continue safeguarding Ballast Quay, Fingringhoe once extraction at Fingringhoe Quarry has ceased. This marine wharf is poorly connected to the main road network and so is not suitable for the export of minerals from other extraction sites or for the import of minerals into Essex.

3.147 The Adopted Essex Minerals Local Plan (1996) identified the possibility of providing for a large new aggregate import facility at Parkeston Quay East, Harwich Port Authority, in the form of a marine wharf. To date, this proposal has not materialised. However, in this Plan it is proposed to continue to safeguard this area for this purpose during the plan-period to ensure that this potential remains available. The small naval yard area is to be excluded from the safeguarded area as this is under new ownership and now offers no likelihood of mineral transhipment.

3.148 There are other small wharves which tranship a range of products including minerals which will need to be considered and safeguarded by the respective LPAs

3.149 No new transhipment sites which would be suitable in the future for establishing rail depots or marine wharves have come forward in the evidence base analysis or following public consultation. This may be an indication of the difficulty of finding such sites given the demanding criteria that would need to be fulfilled. Currently there is evidence of marine wharves in neighbouring areas providing for some of Essex's aggregate needs, with wharves located in Thurrock, north Kent, east London and Suffolk having the potential to supply Essex.

3.150 Existing rail depots and marine wharves contain mineral infrastructure that is of vital strategic importance for the future supply of aggregates needed in Essex. As such, their safeguarding needs to be continued to prevent their redevelopment for other land-uses.

3.151 In accordance with national policy, and given local circumstances in Essex, it is entirely reasonable to continue to safeguard mineral transhipment infrastructure as the consequences of their loss would be significant and irreversible. Safeguarding applies to the rail depots and marine wharves themselves, and also to the storage, handling and processing facilities associated with them.

Secondary processing facilities

3.152 The future growth and development of Essex will require considerable quantities of concrete and asphalt. These products are produced and manufactured at secondary processing facilities across Essex. These kind of facilities include coated stone plant (asphalt), concrete batching plant, mortar plant, and bagging plant.

3.153 In Essex a 'strategic' plant for coated stone is considered to be a facility essential to the delivery of a critically important service and/ or one which enables delivery of an essential infrastructure project over the longer term. Smaller plant are considered non-strategic in importance. Of the following types of secondary processing facilities, only coated stone plants as described below are considered to be 'strategic'.

Coated Stone Plant (Asphalt)

3.154 Asphalt is a vital product as it is used in many different applications. These include road construction and maintenance, pavements, airport runways, school playgrounds, car parks, most footpaths and cycleways, and the roofing of buildings.

3.155 There are seven coated stone plants in current operation and these provide strong spatial coverage across Essex. They are located at Suttons Wharf (Rochford District), Stanway (Colchester Borough), Wivenhoe (Colchester District), Bulls Lodge (Chelmsford City), Essex Regiment Way (Chelmsford City), and two sites within the transhipment site at Harlow Mill Rail Station (Harlow District). The sites at Harlow Mill Rail Station, Essex Regiment Way and SuttonsWharf are located outside existing mineral workings and have permanent planning permissions. The Plants within existing quarries have temporary permissions which will cease upon completion of the mineral working.

3.156 These seven coated stone plants are considered to be of 'strategic importance' in policy terms due to:

- The limited number serving Essex,
- Their locational significance for promoting sustainable transport and distribution patterns due to their relative proximity to the strategic road network and consequent ability to reduce transport distances,
- The relative difficulty of providing for new alternative facilities due to environmental constraints.

3.157 The Mineral Planning Authority (MPA) will safeguard these seven plants because of their strategic importance. However, safeguarded plant within a mineral development would not be allowed to remain beyond the life of the existing planning permission for extraction. Safeguarding is not a means of retaining an 'industrial' use permanently in the countryside.

3.158 On the basis of evidence base material and the results of public consultations it is considered that there are no additional new sites for coated stone plant which would warrant site-specific allocation in the Plan. However, if proposals do come forward in the form of planning applications they will be determined on their merits and in relation to criteria-based policy (Policy DM4). The safeguarding of any new strategic plant would occur for the lifetime of the planning permission for the plant. Safeguarding would ensure the effective operation of the plant is not compromised by other incompatible development proposed in its vicinity.

Concrete and Mortar Products

3.159 Concrete is a similarly vital economic product used in a widespread manner across the construction sector. It is one of the world's most consumed products, being used for road construction, bridges, buildings, and many other physical structures.

3.160 There are 24 concrete batching or mortar plants in Essex. Some are located on existing mineral workings whilst others are standalone facilities on industrial estates in urban areas. The numbers involved do not suggest that any individual plant is critical in its own right. In addition, most have permanent planning permission and are also physically re-locatable. Consequently, these existing sites are considered non-strategic and will not be safeguarded by the Mineral Planning Authority. The site and plants on industrial estates have been separately determined as non-county matters by the respective district/ borough/ city local planning authority and would need to be considered for safeguarding in their own local plans as required by the NPPF.

3.161 The provision of any new non-strategic sites in the future will be addressed through criteria-based policies in this Plan and in the respective Local Plans/ LDFs prepared by Essex district/ borough/ city councils. In respect of permissions granted by the County Council these facilities will not be specifically safeguarded.

Bagging Plants

3.162 It is sometimes necessary to package aggregates at facilities. This serves to protect the product and allows easier transportation. Bagging plants include machinery that range from simple units which are manually operated to automated systems that fill and seal bags and then stack them onto pallets. There are seven bagging plants in Essex, of which four are located within Chelmsford Borough and Colchester District. In terms of type of location, four are sited at extraction sites (and are therefore of a temporary nature), two are on industrial estates and one is at a transhipment site.

3.163 These existing facilities are small-scale, widely distributed to serve Essex and co-located with other facilities. As such they are considered non-strategic and will not be safeguarded.

3.164 The provision of any new sites in the future will be addressed through criteria-based policies and will not be specifically safeguarded.

Mineral Consultation Areas

3.165 It is important that the continued operation and economic viability of mineral transhipment sites and ‘strategic’ coated stone plant are not compromised by incompatible development taking place in their vicinity. The explanatory text for Policy S8: Safeguarding mineral resources and mineral reserves sets out the policy approach to safeguarding and also signposts Appendix 5 which highlights the type of non-mineral development the MPA expects to be consulted upon.

3.166 A Mineral Consultation Area will apply for a distance of 250 metres from any existing or approved (with planning permission) mineral transhipment site or 'strategic' coated stone plant, including the footprint of the plant itself. An existing minerals plant is only safeguarded for the life of the temporary minerals planning permission if it is not a permanent facility. The Local Planning Authority should consult the MPA for its views on planning applications or land-use proposals within such a mineral consultation area, before making a planning decision.

Policy S9- Safeguarding mineral transhipment sites and secondary processing facilities

The following mineral facilities identified on the Policies Map are of strategic importance and shall be safeguarded from development which would compromise their continued operation.

Safeguarded Transhipment Sites:

a. Chelmsford Rail Depot
b. Harlow Mill Rail Station
c. Marks Tey Rail depot
d. Ballast Quay, Fingringhoe (safeguarding to apply only up to the end of mineral extraction at the nearby Fingringhoe Quarry)
e. Parkeston Quay East, Harwich (for potential operation)

Safeguarded Coated Stone Plant:

f. Sutton Wharf, Rochford
g. Stanway, Colchester
h. Wivenhoe Quarry
i. Bulls Lodge, Chelmsford
j. Essex Regiment Way, Chelmsford
k. Harlow Mill Rail Station

The Local Planning Authority shall consult the Mineral Planning Authority and take account of its views before making planning decisions on all developments within 250 metres of the above facilities as defined in the maps in Appendices 2 and 4. Where planning permission is granted for new rail or marine transhipment sites and coated stone plant of strategic importance, those sites will also be safeguarded so that their operation is not compromised. The safeguarding of a strategic plant is for the life of the planning permission or where located in a mineral working, until completion of extraction.

The Local Planning Authority shall consult the Mineral Planning Authority for its views and take them into account on proposals for development within the Mineral Consultation Area of these safeguarded sites, as identified on the Policies Map, before making planning decisions on such proposals.

Spatial Vision: Policy links to the delivery of theme G.
Strategic Objectives: Policy links to the delivery of objectives 10.

Protecting and enhancing our amenity and the environment

Background

3.167 Mineral development can be an environmentally intrusive activity which can have a significant effect on the environment and the people who live and work close by. Mineral working can potentially cause the alteration of topography, landscape and localised hydrology (including the creation or alteration of waterways), noise, dust and traffic impacts, and the loss of bothtranquillity and visual amenity. This can result in severance and disruption of landscape, habitat loss, adverse impacts on local host communities including health and amenity impacts as well as impacts on sites of nature conservation, archaeological and cultural heritage value. Also, due to the concentration of mineral resources in certain parts of the county, working can cause cumulative impacts.

3.168 The capacity of a local area to accommodate minerals development is heavily dependent on the proximity of existing development, the type of operations proposed, how they are planned for and mitigated, and the programme of implementation and monitoring. These issues are best addressed on a site-by-site basis under the Development Management policies found in Chapter 5.

3.169 Any proposals for mineral development will be expected to show compliance with the Habitat Regulations Assessment. Where a proposal would result in an increase of 200 daily HGV movements within 200m of a Natura 2000 site it will be required to undertake and submit an air quality analysis compliant with Environment Agency guidelines as part of the proposal.

3.170 Proposals should consider the wider context of possible adverse impacts and the possible cumulative effect with other development within the vicinity of the site. The proposed scheme of minerals development, including processing, transportation and the impact of ancillary structures associated with minerals development, all need to be fully considered and addressed at the earliest stage of the planning process in order to ensure that any adverse impacts are reduced to an acceptable minimum.

3.171 Although mineral workings are traditionally associated with a range of negative environmental impacts, sensitive working and restoration schemes can make an important contribution to improving the quality of the environment. In accordance with the NPPF, emphasis is placed on the importance of community involvement in the planning process. Mineral operators are encouraged to have effective consultation and liaison with the local community and other stakeholders. This is expected both before planning applications are submitted and during the operation, restoration and aftercare of sites. The MPA's strategic approach is set out in Policy S10. More detailed aspects regarding the protection of amenity and the environment such as specific designations and topics are addressed in the Development Management chapter.

Policy S10- Protecting and enhancing the environment and local amenity

Applications for minerals development shall demonstrate that:

a) Appropriate consideration has been given to public health and safety, amenity, quality of life of nearby communities, and the natural, built, and historic environment,

b) Appropriate mitigation measures shall be included in the proposed scheme of development, and

c) No unacceptable adverse impacts would arise and;

d) Opportunities have been taken to improve/ enhance the environment and amenity.

Spatial Vision: Policy links to the delivery of themes D, H and J.
Strategic Objectives: Policy links to the delivery of objectives 3, 4, 5, 6 and 7.

Access and Transportation

3.172 The transportation of minerals and associated traffic is one of the most significant impacts relating to minerals development and it is what usually causes most concern to communities. It is of utmost importance when permitting new minerals related development (including new extraction sites, extensions to existing sites and transhipment sites) that lorries use appropriate routes. To locate sites far away from the main road network such that other routes would need to be used cannot be justified.

3.173 The transportation of minerals over long distances would be more sustainable by rail and water although the scope for this within Essex remains limited. That said, the safeguarding of wharves and rail head facilities will enable the long distance haulage of aggregate imported to and exported from Essex to continue.

3.174 The nature of the market in Essex, with over 78% of the minerals extracted in Essex being used in the County, means that the majority of minerals are and will continue to be distributed across Essex by lorries as the most effective and economic means of transport. It is recognised that the use of lorries is generally disliked because they are noisier and more intimidating than other ordinary traffic and may add to congestion.

3.175 Therefore the MPA considers that the promotion of sustainable mineral transport can best be served by seeking to minimise the road mileage associated with mineral movements. It is also recognised that there are distances beyond which it is not economic to transport minerals by road, the typical maximum distance for aggregates is 60 km (37 miles) and the average road delivery distances for ready-mix concrete and asphalt is 42 km (26 miles).

3.176 Whilst this Plan must ensure economic viability, it must also direct lorries onto suitable routes, optimise the efficient use of the main road network and apply the route hierarchy. The route hierarchy catalogues roads by capacity, and mineral traffic will be expected to use those roads in the upper tiers, defined as trunk roads (including motorways), strategic routes and main distributors, and in some circumstances appropriate suitable secondary distributors. This is in conformity with the Transport policies contained within the Essex Transport Strategy Policy 6: Freight Movement and the Essex Highway Authority's Functional Route Hierarchy as set out in the Highways Development Management Policies (February 2011).

3.177 The three tiers of the hierarchical approach are equally applicable to any minerals related planning application, including new proposals for transhipment sites requiring connection to the road network. The Highway Authority has reviewed the Preferred and Reserve Sites with their preference being for sites which utilise and make the most effective use of the upper tiers of the route hierarchy in order to keep traffic away from unsuitable minor roads.

3.178 The first tier seeks to ensure access to the main road network via a suitable existing access or junctions with short connections to the highway from the site, and these should be as short as possible and improved if required to the satisfaction of the Highway Authority. The second tier involves the creation of new access/ junctions direct on to the main road network, although instances should be minimised so as not to disturb the flow of traffic on the main roads. The third tier is then considered, which involves the use of a longer section of road to connect the mineral development to the main road network. This would only be acceptable if the section of road was of a suitable standard with available capacity as defined by the Highway Authority. This third tier involving the use of roads outside the main road network will also only be acceptable if there is no adverse impact on road safety and the environment, including local amenity.

3.179 It will continue to be unacceptable for new junctions to be created straight onto a trunk road, or for mineral traffic to use small and unsuitable roads for excessive distances. This approach should minimise HVG and Extra Long Vehicles (ELV) traffic on unsuitable roads so as to limit adverse impacts on communities and the environment. Achieving the access connection to the main road network may include significant road improvements, including junction improvements, road widening on short stretches of road, improvements to visibility around the access to a site or construction of a new access/ junction. It is important that minerals development does not compromise highway safety and that where costs for improvements are incurred, these are met by the developer and not the community. Equally the needs of other road users including pedestrians, cyclists and horse riders should be considered, especially where the highway forms a link in the rights of way network.

3.180 The co-location of mineral related development, where this would reduce mineral journeys and bring environmental and community benefit and enable economies of scale, should be considered wherever practicable. An assessment of the cumulative impacts of mineral development would be necessary to support such an approach.

3.181 Planning applications for minerals related developments will be expected to show that alternatives to road based movements have been considered as part of a Transport Assessment, particularly with regard to the use of existing transhipment facilities when appropriate. However, it is accepted that the majority of mineral extracted in Essex serves the local Essex market and is therefore transported over shorter distances, meaning that lorries are often the only practicable, cost effective option.

3.182 It is important to ensure that the effects of traffic on any local community, the environment and the local road network are carefully considered, including the cumulative impacts of these. Where Preferred or Reserve Sites are extensions to existing quarries, these areas should be worked consecutively in order that mineral extraction in the existing quarry be completed prior to mineral extraction commencing in the new "extension area". This is to ensure that there is no cumulative increase in associated vehicle movements (such as by having two areas operational), and that workings are progressive. Furthermore the new extension areas should not involve an increase in vehicle movements at that site, when compared to vehicle movements under existing permissions. Where appropriate, consideration should be given to the need to manage the movement of traffic to the most appropriate routes and the mechanism available to achieve this, including legal agreements in consultation with communities.

Policy S11- Access and Transportation

Proposals for minerals development shall be permitted where it is demonstrated that the development would not have unacceptable impacts on the efficiency and effective operation of the road network, including safety and capacity, local amenity and the environment.

Proposals for the transportation of minerals by rail and/ or water will be encouraged subject to other policies in this Plan.

Where transportation by road is proposed, this will be permitted where the road network is suitable for use by Heavy Goods Vehicles or can be improved to accommodate such vehicles. The following hierarchy of preference for transportation by road shall be applied:

(i) Access to a suitable existing junction with the main road network, as defined in Section 7, via a suitable section of an existing road, as short as possible, without causing a detrimental impact upon the safety and efficiency of the network.

(ii) Where (i) above is not feasible, direct access to the main road network involving the construction of a new access/ junction when there is no suitable existing access point or junction.

(iii) Where access to the main road network in accordance with (i) and (ii) above is not feasible, road access via a suitable existing road prior to gaining access onto the main road network will exceptionally be permitted, having regard to the scale of the development, the capacity of the road and an assessment of the impact on road safety.

Spatial Vision: Policy links to the delivery of theme D.
Strategic Objectives: Policy links to the delivery of objectives 3, 5, 7 and 14.

Restoration and after-use of mineral extraction sites

Background

3.183 Unlike many other forms of development, mineral extraction is a temporary use of land, although on larger sites it may be a long-term activity. Careful restoration of the site to beneficial after-use(s), often in a phased manner, avoids any permanent adverse impacts on the local environment and will provide opportunities for positive enhancement of the local area.

3.184 Sustainable mineral development aims to preserve and enhance the land's long-term potential to support beneficial after-uses into the future through high standards of working and restoration. Achieving timely and high quality restoration and beneficial after-use(s) is integral to the consideration of all proposals for mineral extraction.

3.185 The way land is restored and its subsequent after-use and management provides a unique opportunity to enhance the character of land taken for mineral extraction. Properly managed restoration to appropriate after-use will benefit communities and their local environment and ensure that valuable new assets are created to hand on to future generations.

3.186 It is an essential part of the spatial strategy to provide a strategic steer on how mineral extraction sites should be restored and put into beneficial after-use. More detailed policy appears later in the Plan to explain how applicants should prepare planning applications to achieve effective restoration and after-use. This includes the policy criteria that will be used by the Minerals Planning Authority in determining applications.

Restoration

3.187 The NPPF states that planning authorities should provide for site restoration and beneficial after-use at the earliest opportunity to be carried out to high environmental standards.

3.188 'Restoration' covers any operations designed to return the land to an acceptable landform, environmental condition or beneficial after-use(s). It includes events that take place before and during mineral extraction (such as the stripping and protection of soils), and operations after extraction up until an after-use is established on site.

3.189 Formerly, infilling was a common part of the restoration process. However, since the volumes of infill materials has declined and is not expected to be substantial during the plan-period due to improvements in recycling, infilling is not going to be as prevalent an option as it was in the past. A reliance on infilling would mean that the time frame to complete a site restoration would be increased. Low level restoration may be the default position in some cases due to the difficulties in acquiring sufficient quantities of inert materials to back-fill to original contour levels. Opportunities for habitat creation will be considered, to promote biodiversity and geodiversity, but regard still will be had for the local landscape.

3.190 It is normal practice to work extraction sites in phases and to restore each phase in turn shortly after its exhaustion has taken place. Progressive working and restoration can lessen the overall impact of mineral working on the environment and minimise the loss of land in agricultural production. The phasing and direction of working can be particularly relevant to minimising the impact on residential and local amenity.

After-use proposals

3.191 'After-use' means the land-use or land-uses that a former mineral working is placed into following its restoration. Once mineral extraction has been completed, a site may be returned to its former land-use or to a number of different new 'after-uses'. In all cases, site restoration will involve the removal of temporary buildings, plant and equipment previously associated with the mineral extraction, unless a further extension site obtains planning permission that requires this to remain.

3.192 There is increased recognition that a greater range of potential after-uses should be considered since this may provide opportunities to enhance the variety and quality of environmental features and increase the wider benefits available to communities. This Plan requires both applicants and the Mineral Planning Authority to consider the range of benefits that mineral restoration and after-use proposals might deliver.

Agriculture

3.193 The NPPF requires restoration and the safeguarding of the best and most versatile agricultural land and to provide for the conservation of soil resources. Therefore there is a policy preference for restoration to agricultural use where the extraction site is located on higher quality agricultural land (Grades 1, 2 and 3a).

3.194 Agriculture and biodiversity enhancement/ habitat creation need not be incompatible land uses. A balance should be achieved between current and future agricultural need, site-specific biodiversity value and/ or potential, and other considerations. Well-designed agricultural restoration can still deliver significant benefits for 'farmland' biodiversity in the form of hedgerows, lakes and ponds, habitat features and small woodlands. Moreover, many UK Biodiversity Action Plan grasslands such as Lowland Meadows or Floodplain Grazing Marsh can be compatible with commercial livestock systems.

3.195 Water features in agricultural restoration can contribute to agricultural irrigation, biodiversity, flood alleviation and storage, and landscape enhancement in a multi-functional way, and should all be considered. Essex County Council now has a strategic role in overseeing the management of local flood risk, that is flooding from surface water runoff, groundwater and ordinary watercourses, and works with the Environment Agency and the Water Companies on strategies to tackle this issue. In particular the Surface Water Management Plan that outlines the preferred surface water management strategy in a given location must be given regard by any proposal.

Biodiversity Enhancement and Habitat Creation

3.196 There is much greater encouragement of biodiversity enhancement, including through Government policy and Environmental Stewardship Schemes, and for climate change adaptation through the provision of natural landscape features. This includes biodiversity offsetting for other development schemes being used to incentivise biodiversity after-use at mineral sites. The minerals industry has always taken a leading role in this regard and is encouraged to continue to do so. This is recognised in the Mineral Working and Active Landfill Site Award Scheme.(5)

(5) The primary objective of the award scheme is to encourage the minerals and land fill industries to devote appropriate attention to minimising the impact of operations on the environment and also to acknowledge where a high standard of care is evident- outside of that normally controlled through the planning permission.

3.197 All mineral site restoration should provide a net-gain in biodiversity and contribute towards establishing a coherent and resilient ecological network through the creation of priority habitat, integrating with landscape-scale conservation initiatives where appropriate(6) in order for ECC as the MPA to be compliant with the 'duty' placed upon it by the Natural Environment and Rural Communities Act 2006. The Plan proposes an ambitious target for the creation of a minimum of 200ha of priority habitat creation in Essex from the Preferred and Reserve Site allocations. Six UK Biodiversity Framework habitats have been selected reflecting local conservation priorities as well as the geological and hydrological character of the Preferred and Reserve Sites:

- Coastal and Floodplain Grazing Marsh,
- Lowland Dry Acid Grassland,
- Lowland Heathland,
- Lowland Meadows,
- Open Mosaic Habitats on Previously Developed Land,
- Reedbeds,

3.198 The 200ha MLP target will be achieved through:

- The creation of new areas of priority habitats as part of dedicated biodiversity restoration schemes,
- The integration of biodiversity enhancement into all development sites,
- Contributions to support off-site enhancements such as the creation or restoration of priority habitats in proximity to a mineral extraction proposal where positive benefits cannot be secured on site, known as biodiversity offsetting
- The integration of priority habitats into agricultural restoration.

3.199 For instance the Preferred and Reserve Sites in Appendix 1 at Bradwell Quarry (Rivenhall), Broadfield Farm (Rayne), Sunnymead (Alresford), Maldon Road (Birch) and Land at Colemans Farm (Witham) provide particular opportunities for new habitat areas.

3.200 There are also potential opportunities for informal outdoor recreation, public rights of way, landscape enhancement, heritage and geological conservation, improved water management and measures to promote mitigation and adaptation to climate change impacts.

(6) Priority Habitats are defined in the NPPF as being the Habitats of Principle Importance included in the England Biodiversity List published by the Secretary of State under section 41 of the Natural Environment and Rural Communities Act 2006. They are habitats identified as requiring action in the UK Biodiversity Framework habitats and continue to be regarded as conservation priorities.

Outdoor recreation

3.201 Improved public access to the natural environment can be provided by creating enhanced access as well as new leisure and amenity areas. This may include the creation of new green spaces (such as parks, green corridors or green wedges and woodlands), improvements to the strategic rights of way network, increased public access though the provision of footpaths and cycleways, and other outdoor recreation uses.

3.202 In preparing their planning applications, developers should have regard to guidance set out in Natural England's 'Accessible Natural Greenspace Standard' and the 'Nature Nearby' (2010) report.

3.203 The NPPF makes clear that the planning system has a role to play in facilitating social interaction and creating healthy, vibrant communities. The provision of new opportunities for outdoor recreation in site restoration proposals will support this role by providing greater opportunities for increased physical activity and improved mental health.

Landscape enhancement

3.204 Opportunities may exist to provide new natural landscape features to enhance the local landscape or contribute to existing landscape character. Such features may include water bodies, woodland, copses, hedgerows and grassland areas. Restoration and after-use schemes should be integrated with green infrastructure projects at a wider spatial scale (for example at the sub-regional or district-wide scale), as this would create wider community and environmental benefits in terms of, for example, more robust biodiversity networks, improved corridors or linkages for open space, natural areas, biodiversity and Public Rights of Way, as well as improved opportunities for outdoor recreation.

Heritage

3.205 Site restoration may enable improved access to historic sites, enhance the setting of historic features or provide the opportunity to present the results of archaeological investigations to the general public. Arrangements for the conservation of geological or other features of interest should comply with best practice advice.

Climate Change

3.206 Site restoration provides an opportunity to create features that can help with mitigation or adaptation to the impacts of climate change (see Policy S3: Climate Change). Restoration may incorporate water management schemes (such as sustainable drainage, flood water storage, flood alleviation, public water storage and irrigation), new areas of natural vegetation for carbon absorption, or the provision of natural landform or shade to promote 'urban cooling'. These possibilities should be explored to help build the future resilience of the County.

Other policy considerations

3.207 A site's after-use(s) should be in conformity with the policy framework set out in Local Plans/ LDFs prepared by Essex district/ borough/ city councils. The Mineral Planning Authority will consult the relevant local council for its views when determining planning applications for minerals development.

3.208 The main purpose of the Green Belt is to prevent urban sprawl and to preserve 'openness'. Whilst this does not prohibit minerals development, proposals would need to be carefully considered in light of their potential impacts, in line with the NPPF and Circular 02/09: The Town and Country Planning (Consultation) (England) Direction 2009. Minerals can only be worked where they occur, and where mineral development is situated in the Metropolitan Green Belt, the whole of the proposal (including after-use) shall comply with national policy.

3.209 Mineral workings restored by landfill materials or, particularly, to water uses or wetland habitat, may attract large numbers of birds. These may be a safety hazard to aircraft at sites close to airports and aerodromes because of bird strike. Applicants and the Mineral Planning Authority shall consult airport operators and military base authorities for their views before finalising restoration and after-use proposals. This is covered separately by Policy DM1 (Development Management Criteria) and by Policy S10: Protecting and Enhancing the Environment and Local Amenity.

3.210 As well as minimising adverse impacts on the environment and communities, it is important that recognition is given to the opportunities minerals development may present, particularly through site restoration and after-use, to enhance and extend the natural environment and increase the potential for its enjoyment. The weight accorded to environmental impacts must reflect the sensitivity and importance of the natural resource or environmental asset to be affected, and take account of the positive environmental, social and economic opportunities that development may present.

Policy S12- Mineral Site Restoration and After-Use

Proposals for minerals development will be permitted provided that it can be demonstrated that the land is capable of being restored at the earliest opportunity to an acceptable environmental condition and beneficial after-uses, with positive benefits to the environment, biodiversity and/ or local communities.

Mineral extraction sites shall:

1. Be restored using phased, progressive working and restoration techniques,

2. Provide biodiversity gain following restoration, demonstrating their contribution to priority habitat creation and integration with local ecological networks,

3. Be restored in the following order of preference,

   (i) At low level with no landfill (including restoration to water bodies),

   (ii) If (i) above is not feasible then at low level but with no more landfill than is essential and necessary, to achieve satisfactory restoration,

   (iii) If neither of these are feasible and the site is a Preferred Site as may be determined by the Waste Local Plan, then by means of landfill.

4. Provide a scheme of aftercare and maintenance of the restored land for a period of not less than five years to ensure the land is capable of sustaining an appropriate after-use,

5. Where appropriate, proposals shall demonstrate the best available techniques to ensure that:

a) Soil resources are retained, conserved and handled appropriately during operations and restoration,

b) In the case of minerals development affecting the best and most versatile agricultural land, the land is capable of being restored back to best and most versatile land,

c) Hydrological and hydro-geological conditions are preserved, maintained, and where appropriate, managed to prevent adverse impacts on the adjacent land's groundwater conditions and elsewhere,

d) Flood risk is not increased,

e) Important geological features are maintained and preserved,

f) Adverse effects on the integrity of internationally or nationally important wildlife sites are avoided.

Proposals shall demonstrate that there will not be an unacceptable adverse impact on groundwater conditions, surface water drainage and the capacity of soils for future use. Proposals shall also have regard to any relevant Surface Water or Shoreline Management Plans. Proposals will also demonstrate that the working and restoration scheme is appropriate and the implementation and completion of restoration is feasible.

Spatial Vision: Policy links to the delivery of themes E, H and J.
Strategic Objectives: Policy links to the delivery of objectives 3, 7,12 and 13.

4.0 Preferred and reserve mineral sites for primary mineral extraction

4.0 Preferred and reserve mineral sites for primary mineral extraction

Sand and gravel

4.1 The Strategy sets out the plan requirements for the provision of primary minerals for the County for the 18 year period covering 1st January 2012 to 31st December 2029. The provision made ensures an adequate and steady supply of minerals for land won sand and gravel and silica sand. Policies S6 and S7 provide the policy framework for this whilst the explanatory text presents the justification.

4.2 The additional Plan provision is:

- 40.67 million tonnes of sand and gravel; and
- 0.39 million tonnes for silica sand

4.3 After making allowance for past production rates and the mineral capacity of existing permitted sites from the 1 January 2012 onwards, the Plan proposes that additional site-specific land allocations for mineral extraction should be made in the form of new Preferred Sites (this includes site extensions and new sites).

4.4 The Preferred and Reserve Sites as defined in Policies P1 and P2 provide for the following amount of mineral resource up to 2029,

- 40.824 million tonnes of sand and gravel extraction with 31.824mt coming from Preferred Sites and 9mt coming from Reserve Sites; and
- 0.39 million tonnes of silica sand

4.5 This is comprised of 16 allocations on 10 sites, of which 13 are extensions to existing quarries and 3 are new sites. Of these 16 allocations 2 would be Reserve Sites.

4.6 The approach to meeting the mineral supply needs of the County has necessitated a reliance on landowners and the mineral industry to come forward with site proposals for consideration. This ensures there is a high probability that the proposed sites will come forward as planning applications as they have been actively promoted by mineral operators and landowners. The number of sites that ultimately came forward substantially exceeded those that were needed and as such a robust process for site selection was developed. The site assessment and site selection process for identifying the location of Preferred Sites and Reserve Sites was set out in a separate technical report entitled ‘Site Assessment Report’.

4.7 This built upon an extensive programme of testing and evaluation of the merits of potential alternative sites and an analysis of the findings of public consultation and stakeholder engagement during several stages of plan preparation. A Sustainability Appraisal Report is also available as a supporting document explaining how Sustainability Appraisal/ Strategic Environmental Assessment (SA/ SEA) has informed and influenced the selection of sites.

Policy P1- Preferred and Reserve Sites for Sand and Gravel Extraction

In the case of Preferred Sites for sand and gravel extraction, the principle of extraction has been accepted and the need for the release of mineral proven. In the case of Reserve Sites for sand and gravel extraction, the principle of extraction has also been accepted, however, the release of minerals from these sites is subject to the landbank falling below seven years.

The Mineral Planning Authority will grant planning permission for sand and gravel workings within the Preferred and Reserve Sites, listed in Table 5 (Preferred Sites for land won Sand and Gravel Provision) and as shown on the Policies Map, subject to the proposal meeting the detailed development requirements set out in Appendix 1, other relevant policies of the Development Plan for Essex and any other material considerations.

Spatial Vision: Policy links to the delivery of themes A, B and G.
Strategic Objectives: Policy links to the delivery of objectives 9 and 10.

Table 5. Preferred and Reserve Sand and Gravel Sites

Site No.	Location	Proposer	Area (ha)	Approx. tonnage (mt)	MPA comments
Preferred Sand and Gravel Sites					
A3	Bradwell Quarry, Rivenhall	Blackwater Aggregates	9	1.0	Extension to existing quarry. Working and restoration to be integrated with A4-A7
A4	Bradwell Quarry, Rivenhall	Blackwater Aggregates	25.5	3.0	Extension to existing quarry. Working and restoration to be integrated with A3 & A5-A7

Site No.	Location	Proposer	Area (ha)	Approx. tonnage (mt)	MPA comments
Preferred Sand and Gravel Sites					
A5	Bradwell Quarry, Rivenhall	Blackwater Aggregates	35	3.0	Extension to existing quarry. Working and restoration to be integrated with A3-A4/ A6-A7
A9	Broadfield Farm, Rayne	Lafarge Tarmac	90	4.28	New Site
A13	Colchester Quarry, Fiveways	Lafarge Tarmac	15.5	2.95	Extension to existing quarry
A20	Sunnymead, Alresford	Lafarge Tarmac	65	4.67	Extension to existing quarry
A22	Little Bullocks Farm, Little Canfield	Edviron	6.9	0.65	Extension to existing quarry
A23	Little Bullocks Farm, Little Canfield	Edviron	5.5	0.06	Extension to existing quarry
A31	Maldon Road, Birch	Hanson	25	4	Extension to existing quarry
A38	Blackley Quarry, Gt Leighs	Frank Lyons Plant Services	22	1.07	Extension to existing quarry
A39	Blackley Quarry, Gt Leighs	Frank Lyons Plant Services	21	0.75	Extension to existing quarry
A40	Shellows Cross, Roxwell / Willingale	Lafarge Tarmac	105	3.5	New site
A46	Colemans Farm	Simon Brice	46	2.5	New site
B1	Slough Farm, Ardleigh	Aggregate Industries	11.6	0.46	Extension to existing quarry

Site No.	Location	Proposer	Area (ha)	Approx. tonnage (mt)	MPA comments
Reserve Sand and Gravel Sites					
A6	Bradwell Quarry, Rivenhall	Blackwater Aggregates	37.5	2.5	Extension to existing quarry. Working and restoration to be integrated with A3-A5 / A7
A7	Bradwell Quarry, Rivenhall	Blackwater Aggregates	95	6.5	Extension to existing quarry. Working and restoration to be integrated with A3-A6
		Total Provision		40.824MT	

Notes:
1. Approximate tonnages are in millions of tonnes (mt).

Industrial minerals

4.8 Policy S7 sets out the commitment and requirement to plan for additional silica sand provision at Martells quarry. This will be met by a Preferred Site to be worked as an extension to the existing quarry.

- Martells Quarry, Ardleigh – 460,000 tonnes of silica sand extraction

4.9 All Preferred Sites are identified on the Policies Map whilst Appendix 1 contains a Site Profile for each site which sets out its development requirements.

Policy P2- Preferred Sites for Silica Sand Extraction

In the case of Preferred Sites for silica sand, the principle of extraction has been accepted and the need for the release of mineral proven.

The Mineral Planning Authority will grant planning permission for silica sand workings within the Preferred Site listed in Table 6 (Preferred Site for Silica Sand Provision) and as shown on the Policies Map, subject to the proposal meeting the detailed development requirements set out in Appendix 1, other relevant policies of the Development Plan for Essex and any other material considerations.

Spatial Vision: Policy links to the delivery of themes A, B and G
Strategic Objectives: Policy links to the delivery of objectives 9 and 10

Table 6. Preferred Site for Silica Sand Provision

Site No.	Location	Proposer	Area (ha)	Approx. tonnage (tonnes)	MPA comments
B1	Slough Farm, Martells Quarry, Ardleigh	Aggregate Industries	11.66	0.46mt	Total estimated yield at site is 0.86mt, of which 54% is Silica Sand (0.46mt) and 46% is Sand and Gravel (0.39mt) Maximum Annual Output 45,000 tpa

Further Information about Preferred and Reserved Sites

4.10 The Preferred and Reserve Sites are site specific allocations and the site boundary delineated in the respective site profile is the maximum extent of the minerals development within a planning application. A planning application for mineral extraction beyond the boundary of the site profile would not be permitted.

4.11 Identification of a Preferred Site does not mean that planning permission will automatically be granted for mineral extraction. The Plan represents a broad view of the suitability of a Preferred Site and far more detailed information will need to be supplied to support any actual planning application. At that stage there could be the identification of an unforeseen environmental complication or other issue with the site which precludes the use of that site for mineral development. This applies equally to Reserve Sites, however, for extraction to be supported at Reserve Sites the need for mineral extraction would require to be demonstrated. Such need could only be demonstrated if the landbank falls below 7 years.

4.12 Conditions will be imposed on planning permissions to protect features of importance and restrict operations to mitigate against impacts on the environment, local communities and highways. Detailed matters relating to the operation of sites will be considered and addressed at the time a planning application is made.

5.0 Development management policies

5.0 Development Management Policies

Background

5.1 Mineral development, particularly mineral extraction, can have a considerable impact on its surroundings and this must be carefully considered. The impacts on the quality of life of local people and on the environment are key considerations when deciding where to locate new minerals development. A wide range of potential adverse impacts can arise and the specific nature of these impacts and the ways of addressing them will vary case by case. The planning policy framework provided by this Plan is considered flexible enough to deal with the variety of issues that may arise as well as variations in local circumstances.

The Application Process

5.2 The Planning and Compulsory Purchase Act 2004 and Localism Act 2011 introduced major changes to the planning system, including greater public involvement throughout the planning process.

5.3 The MPA's Statement of Community Involvement states that pre-application discussions between the potential operator and MPA is good practice, and proposes that applicants with significant development proposals should carry out pre-application public consultation. This is supported within the relevant provisions of the Localism Act 2011. It is also considered that pre-application discussion will continue to be encouraged when not statutorily required. In respect of the submission of sufficient information, the applicant is directed to the adopted Local Validation List.

5.4 As explained earlier in Section 3.5 and Section 3.6, the need to achieve sustainable development is a key driver and the policies in the NPPF taken as a whole constitute the Government's view on what sustainable development in England means in practice for planning. In essence there are three dimensions to sustainable development, the economic, the social and the environmental, as previously described throughout this report.

5.5 It is expected that applications for minerals development will provide information to demonstrate that the proposal provides net gains in all three of these dimensions. For example applicants will be encouraged to provide 'economic statements' in support of their proposals.

Environmental Impact Assessment

5.6 All planning applications are screened as part of the Environmental Impact Assessment (EIA) process to determine whether or not they require an Environmental Statement. This is required by EU and UK law. The screening/ scoping process helps to identify whether a proposal is likely to have significant environmental effects, and if so, an Environmental Statement must accompany the planning application.

5.7 Proposals falling within Schedule 1 of the EIA Regulations must be accompanied by an Environmental Statement whilst proposals under Schedule 2 may require an Environmental Statement depending on detailed circumstances. The Environmental Statement will identify the likelihood of significant impacts occurring. It will show how these impacts can be avoided, mitigated and compensated for, and consider alternative ways the development could be carried out.

5.8 In cases where an Environmental Statement is not required, the applicant must still consider all the impacts arising from the proposed minerals development and supply information to demonstrate that these have been addressed within their planning application.

5.9 Planning conditions are always attached to planning approvals to regulate the operation of the proposed minerals development. Planning conditions are used to agree specific details about the proposal (such as a landscape scheme) and to ensure the effects on local people and the environment are kept within acceptable levels (for example by limiting working hours).

5.10 Where significant adverse effects cannot be adequately controlled or prevented, or insufficient evidence has been supplied to demonstrate whether impacts can be adequately mitigated, planning permission will be refused.

Review of old mineral permissions (ROMP)

5.11 Although a temporary use of land, mineral working can last for many years and have a noticeable impact on the environment. Some existing mineral sites were given planning permission several decades ago when standards of operation, restoration and after-use were much lower than today's modern standards. Legislation has now tackled this problem.

5.12 The Planning and Compensation Act 1991 required Interim Development Order (IDO) permissions granted between 1943-1948 to be registered with the Mineral Planning Authority (MPA). Subsequently, the Environment Act 1995 required the MPA to review mineral planning permissions granted between June 1948 and February 1982, and to impose periodic reviews of permissions granted after February 1982. The purpose being to enable the MPA to impose modern operating, restoration and after-use conditions on these 'old' permissions. This process operates periodically, whereby each active site (including IDO's) must be reviewed every 15 years.

5.13 This ongoing updating process is known as the 'Review of Old Mineral Permissions' (ROMP). Like standard planning applications for mineral development, the ROMP applications for new schemes of conditions go through statutory consultation and administrative procedures before they are determined. Normally ROMP applications will be accompanied by an Environment Statement which assesses the likely environmental impact of the development.

Relevant issues to be considered

5.14 Whether proposals for mineral development come forward for determination in the form of standard planning applications, or as ROMP applications for new schemes of conditions, the impact of proposals on the environment and amenity must be carefully assessed and considered by the MPA. The following guidance is intended to assist developers in the preparation, design and submission of proposals which achieve high quality standards of development.

Transport

5.15 The transportation of minerals can potentially lead to substantial adverse impacts on the local environment. Once extracted, it is necessary to move minerals either to other sites for processing or to the customers who require them. Therefore, quarries within the Plan area are often generators of HGV traffic, leading to noise, air pollution, vibration, dust and a potential road safety hazard. Mineral Planning Authorities should seek to encourage and, where practicable, enable the carrying of material by water and rail wherever possible. This would reduce carbon emissions from minerals transportation, and may help lessen the contribution of minerals transportation to climate change.

5.16 Proposals for minerals development that generate significant amounts of movement shall be required to be supported by a transport assessment of potential impacts. This should include the movement of minerals within and outside the site, emissions control, energy efficiency and local amenity including impacts on highways safety and congestion. Where necessary the provision of a Site Transport Plan setting out the developers' mechanisms to control traffic movements within the locality will be encouraged in consultation with local communities. A Site Transport Plan deals with issues including routing, hours of movement and considerate driving.
This will help minimise the environmental impacts of transporting minerals. The mechanisms for managing traffic will be enforceable by the MPA. Developers should also have regard to the ECC Development Management Policies (February 2011).

Pollution and Amenity impacts

5.17 Minerals development can cause concern to residents and local communities because of noise, dust, fumes, vibration, illumination and debris on the highway from vehicle movements. When considering planning applications the MPA must be satisfied that those potential adverse impacts have all been satisfactorily investigated and addressed.

5.18 Levels of disturbance will vary according to the nature of the proposed development, the stage minerals development has reached and the relationship to the surrounding area. Some sites operate with very little plant or equipment and cause minimal impacts. Other developments are more major and can produce significant potential impacts which must be fully understood and fully addressed by the applicant in any planning application.

5.19 Factors to be taken into account include:

- The proximity of proposed development to homes, schools and other sensitive and incompatible land-uses,
- The location and siting of plant and other ancillary development,
- The topography of the site and the surrounding area (including natural and man-made features which can reduce impacts, such as landscape features), and,
- The site's relationship with roads, railways and waterways.

5.20 Local amenity can be protected by minimising work in sensitive areas and creating 'buffers' between residential areas and mineral workings. A minimum of a 100m 'buffer zone' from the extraction face to the wall of a residential property would normally be required to minimise the impact of working on local amenity.

5.21 Many potential pollution impacts can be overcome by using measures to remove or reduce emissions at source, or by adopting appropriate working practices. Examples of these measures include:

- Controlling working hours,
- Locating plant away from neighbouring developments,
- Housing machinery indoors or attaching silencers to plant,
- Using water sprinklers to reduce dust, installing wheel washing for lorries, and,
- Directing lighting downwards and away from properties.

5.22 However, the planning process should not seek to duplicate the requirements of the pollution control regime, which is managed by the Environment Agency and the Environmental Health Authority.

Health

5.23 A Health Impact Assessment (HIA) may be required to provide decision-makers with information about how a policy or proposal may impact, directly or indirectly, on people's health. HIA in this context will be used to assess the possible significant health effects of a minerals development site, and this will be affected by a variety of influences including transport routing, dust, noise, safety and local environment considerations. The HIA can then be analysed with its recommendations informing developers and the planning authority.

5.24 If any of these impacts cannot be satisfactorily mitigated against, development should not proceed.

5.25 The HIA should connect with other impact assessments, including those associated with the environment and transport.

Flooding, water resources and water quality

5.26 Minerals development has the potential to impact upon surface water features such as rivers, ditches and lakes, groundwater levels, groundwater movement and has the potential to affect areas at risk of flooding. It is important that all such potential impacts are investigated and addressed.

5.27 The Technical Guidance to the NPPF sets out national guidance to be followed in relation to flood risk. It requires that the sequential and exception tests are applied in relation to minerals development proposed in areas at risk from flooding although sand and gravel working is 'water compatible development' and mineral working and processing is 'less vulnerable' to flood risk. The MPA will apply this guidance when assessing and determining planning applications for proposed minerals development in flood risk areas.

5.28 As stated earlier in the supporting text of Policy S12, Essex County Council has a strategic role in overseeing the management of local flood risk, that is flooding from surface water runoff, groundwater and ordinary watercourses. Its powers now include working with organisations such as the Environment Agency and water companies and developing Surface Water Management Plans for managing surface runoff, groundwater and ordinary watercourses throughout Essex. It must also be ensured that developments drain in a manner which does not increase flood risk elsewhere, as well as trying to reduce the overall risk of flooding wherever possible. A number of inter-related flood and water management strategies have been produced in Essex which seek to improve our understanding of surface water flood risk with the ultimate aim of reducing risk where possible. These include the Preliminary Flood Risk Assessment and Surface Water Management Plans.

5.29 The location of Preferred and Reserve Sites for future minerals development proposed in this Plan has been informed at all stages by a Strategic Flood Risk Assessment (SFRA). Those proposing to develop in these Preferred or Reserve Sites should refer to the SFRA and the Technical Guidance to the NPPF when preparing their proposals. It may be necessary to include flood management measures in the proposal, including an adequate surface water drainage strategy.

5.30 To prevent an increase in flood risk it is necessary to maintain the capacity of the floodplain and the free flow of floodwater. Increased risks of flooding associated with mineral working can be avoided by:

- Ensuring there is no net loss of floodplain storage area,
- Managing the rate of surface water run-off from the site and releasing surface water run-off at an appropriate rate and volume to a watercourse or sewer,
- Meeting the National and Local principles/ standards for SuDS design,
- Ensuring that floodwater flows are not obstructed or impeded by earth bunds, ancillary structures or stockpiles.

5.31 There may also be the potential to provide additional flood storage areas and therefore reduce flood risk in the surrounding area.

5.32 Surface water and groundwater provide fresh water supplies which support the resident population, wildlife and the environment. This water is used for drinking, cooking, washing, agricultural and horticultural irrigation, manufacturing processes, recreational purposes and is essential for biodiversity and the landscape.

5.33 Essex on the whole has a very low vulnerability to water contamination, however, the north-western part of the County has a high vulnerability and is a designated Source Protection Zone. Mineral extraction, processing and aggregate recycling all have the potential to have adverse effects on the quality of groundwater, if not regulated correctly. If mineral extraction takes place in an area of high vulnerability, and de-watering is involved, this can have the direct effect of a loss of water from the local groundwater system, and a loss of storage capacity within the remaining saturated zone. Mineral processing and recycling can involve high usage of water, which can become contaminated and subsequently affect any nearby groundwater sources if not managed properly. When considering proposals for mineral extraction it is expected that due regard will be made to the Water Framework Directive and relevant river basin management plans to ensure that it does not cause deterioration in the status of any water bodies.

5.34 Measures must be taken to protect these natural assets from the adverse impact of minerals development by:

- Ensuring there will be no significant change to groundwater or surface water levels. The process of 'dewatering' – whereby water is pumped out of a pit to allow dry working below the water table – must be carefully monitored, to ensure no adverse impacts on surrounding water availability,
- Carrying out detailed hydrological and hydro-geological assessments to establish the base line position and ensure operations are appropriately designed, monitored and managed,
- Preventing the pollution of ground and surface water by chemicals and other contaminants. A considerable amount of water can be used when processing aggregates. Drainage during site operations and any discharge to local watercourses, must be controlled to comply with standards set by the Environment Agency through licensing.

5.35 Minerals development in proximity to the coast may have the potential to impact upon flooding from the sea. Regard, in this respect, should be had to the Essex and South Suffolk Shoreline Management Plan.

Visual and landscape impact

5.36 Minerals development can result in significant changes to the local landscape, not only while mineral working is in progress, but also over the longer-term depending on local circumstances. Changes may appear adverse whilst operations are underway, but can be of benefit in the longer term if the working programme, restoration and after-use have been considered thoroughly. When excavation takes place over many years, impacts on the landscape will change as phased working progresses and as landscaping and screening grows and adapts. Whilst temporary landscape works such as bunds or earth mounds will affect the appearance of an area, they are usually essential to reduce local visual and noise impacts, or allow valuable soils to be stockpiled for future use.

5.37 There is one Area of Outstanding Natural Beauty in Essex at Dedham Vale which is a nationally important landscape. There are also important areas of ancient woodland across Essex, often with veteran trees.

5.38 The undeveloped Essex coast is a unique feature of the County and is important for its landscape quality as well as biodiversity and heritage features. The pattern of river valleys crossing Essex towards the coast is also a distinctive landscape feature. All of these landscape features will be strongly protected from any adverse impacts arising from minerals development. The intrinsic character and beauty of the Essex countryside should be recognised in preparing proposals for minerals development.

5.39 Mineral development in the countryside should pay particular regard to the local landscape and should aim to protect and enhance this, including through restoration and after-use. The Landscape Character Assessments undertaken by the local planning authorities should be used by developers to inform the design and working programmes of their mineral proposals. Impacts on the landscape can be avoided, reduced or overcome by a variety of measures including:

- Safeguarding local features (such as significant topography, woodland, veteran trees, hedgerows and viewpoints) to retain biodiversity networks and provide part of the framework for restoration,
- Using planting schemes and landscaped bunds and mounds to screen minerals development,
- Early design and planting of appropriate native species to enhance landscape character, support biodiversity networks and provide mature features to be later incorporated into restoration proposals,
- The careful siting of plant and machinery, including providing this at low level and using colour recessive paint.

Biodiversity and geological conservation

5.40 There are numerous sites of biodiversity and geological interest in Essex and these will continue to be afforded strong protection. The County has important international and national designations, namely Special Areas of Conservation, Special Protection Areas, Ramsar Sites, National Nature Reserves and Sites of Special Scientific Interest. There are also important areas of ancient woodland and areas of particular geological significance, some of which are designated as Local Geological Sites.

5.41 The degree of protection afforded will be consistent with the site's status in terms of its international, national or local importance, the presence and status of any protected species which may be affected and the site's biodiversity and geological interest in the wider environment. The strongest protection will be given to internationally and nationally important sites. Minerals development located some distance from a designated area can still have an adverse impact, including through pollution, changes to water tables or drainage patterns, flooding or transport movements. An assessment under the Conservation of Habitats and Species Regulations 2010 may be required to see if an 'Appropriate Assessment' is needed in relation to European Sites.

5.42 A baseline ecological survey will be necessary where biodiversity features are present on a proposed site. Flora and fauna of intrinsic local importance can also contribute to a wider network of habitats which are important for the health and viability of other flora and fauna. Such surveys are essential in identifying what exists on a mineral site and establishing whether such features should be retained and managed. The Essex Biodiversity Action Plan provides useful background information in this regard.

5.43 Mineral proposals must include measures to avoid or minimise adverse impacts on biodiversity and geological conservation interests, and should consider the scope to protect and enhance them in the long-term. Possible measures include maintaining existing habitats on or near the site during the duration of mineral working, proposals for habitat creation as part of restoration and protecting key features during working (such as geological features or nesting grounds).

Heritage assets

5.44 Heritage, or the historic environment, includes archaeology, buildings and structures, areas of historic landscape, conservation areas, historic parks and gardens, and battlefield sites. Essex's identity and sense of place is closely linked with its rich heritage. This is an irreplaceable resource which is vulnerable to damage or loss from development.

5.45 Listed buildings of historic, architectural and cultural importance, and their settings, will be protected from significant adverse impact. Conservation areas which contain groups of listed buildings and other areas of historic interest will be similarly protected. The emphasis will be on preserving the physical structure, visual setting and any features of special architectural or historic interest of a listed building, and to preserving or enhancing the character or appearance of a conservation area.

5.46 Applicants preparing proposals for mineral development should refer to Historic Environment and Historic Landscape Character Assessments, Local Plan/ LDF evidence base studies, English Heritage records and information held on the Scheduled Ancient Monument Record before submitting an application.

5.47 Information on archaeological sites and material in Essex is held in the Historic Environment Record. However, not all archaeological remains are known about and recorded. To safeguard presently unknown remains, an archaeological assessment should be carried out by the developer if an area is likely to be of high archaeological potential (as implied by the Historic Environment Record). The assessment must be carried out before a planning application is submitted as this will help determine the suitability of the proposal, appropriate methods of working and suitable conditions if planning permission is granted.

Recreation and right of way network

5.48 Minerals development can affect public rights of way, open spaces and informal outdoor recreational land. Public access to such routes and areas may be restricted for health and safety reasons and to prevent criminal damage. Where rights of way are affected, arrangements for their temporary or permanent diversion must be put in place as part of proposals. This will apply to definitive routes used by cyclists, horse riders and walkers that either cross or are close to a site. Restoration of mineral workings may provide an opportunity to provide new or enhanced rights of way and outdoor recreational uses.

Land and soil resources

5.49 Rural land which supports farming, horticulture and forestry must be protected to ensure this valuable finite resource is available for future generations. In Essex the presence of mineral resources (especially sand and gravel) often contributes to the good quality of the agricultural land. The County contains extensive areas of grades 1, 2 and 3a farmland (known as the ‘best and most versatile’) which is considered an important national resource. Proposals for mineral working on higher grade agricultural land must protect these soils in order to enable the site to have the potential to revert back to productive agricultural use in the future.

5.50 Top-soil and sub-soil should be carefully removed and handled with care and stored separately during the preparation and working of a mineral site. This will support later land restoration to agriculture and other beneficial uses. The overall integrity of land and soil should be protected during working and long-term use of the site once it is fully restored.

5.51 Measures must be taken to ensure quarry sides are stable and will not result in subsidence either on or off site. Surrounding areas and properties must not be adversely affected by the effects of subsidence or land slippage. Where mineral sites adjoin roads, railways, bridges, or energy transmission routes, appropriate land margins must be provided to ensure the continued structural integrity of this vital infrastructure.

Potential hazard to aircraft from bird strike

5.52 Whilst the process of mineral extraction does not in itself attract bird populations, the restoration and after-use of workings may involve the creation of water features, nature reserves and berry producing plants all of which have the potential to attract flocks of birds. This can increase the risk of bird strike for aircraft in the vicinity of airports/ airfields leading to concern about aircraft damage or danger to life.

5.53 There are safeguarding areas around the Stansted and Southend airports which must be taken into account when considering future areas for minerals development and these must be fully considered by potential developers. There are smaller airfields in Essex used for business aviation, recreational flying and military activities where similar safeguarding considerations also apply.

5.54 Proposals for site working, restoration and after-use must give careful consideration to the form of working and landscaping, planting and water features if located within an airport/ aerodrome/ or military safeguarding area.

Cumulative impact

5.55 Minerals development, especially primary extraction, can have a significant impact upon the environment and on communities. This impact can be magnified if there are a number of permissions granted for mineral development within close proximity, or if permission to extract is extended, resulting in many years of mining activity in one location.

5.56 Minerals development proposals which require an Environmental Statement (ES) to be supplied can be required to address cumulative effects within an area. This would ensure the overall effects of a proposal are considered within the context of historic, existing, newly permitted and planned mineral operations within a locality. In addition to the direct effects of a development, the ES should also cover indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, and positive and negative effects. A particular project may however give rise to a small number of significant effects and therefore only require a full and detailed assessment in one or two aspects of the local environment within the proposal to demonstrate how those impacts have been adequately addressed, mitigated or compensated for.

5.57 Cumulative impacts could arise if mineral sites in proximity to one another were worked at the same time, or if working in a particular area was to continue over a long period of time. The Mineral Planning Authority has taken steps to minimise the cumulative impacts of future mineral working in the County through the spatial strategy and by choice of location and phasing of site working.

5.58 Potential applicants should consider what other existing and proposed development will take place under their control, or otherwise, in the area when formulating their own proposals to avoid unacceptable cumulative impacts. The MPA will normally require a primary site to have extraction completed and be undergoing restoration before a new extension area is prepared for extraction.

5.59 Mitigating measures might include such measures as the phasing of extraction operations so that one site is completed before a second commences, a restriction on the number of HGV movements or the timetabling of such movements, undertaking pre-extraction landscaping works to reduce cumulative visual impacts and addressing needed junction improvements.

5.60 Where cumulative impacts have not been, or are unable to be satisfactorily addressed through the application, the MPA could have grounds to refuse permission for that development.

Planning Obligations and Conditions

5.61 Planning Obligations, or Section 106 agreements, are legal agreements negotiated between local authorities and developers, or are unilateral undertakings made by developers. The use of planning obligations will be in line with the prevailing legislation, guidance and policies of the county. In contrast, planning conditions are the terms under which planning permission is granted.

5.62 The MPA will require developers to enter into such planning obligations to make a proposed development acceptable where planning conditions alone would not be appropriate.

Policy DM1- Development Management Criteria

Proposals for minerals development will be permitted subject to it being demonstrated that the development would not have an unacceptable impact, including cumulative impact with other developments, upon:

1. Local amenity (including demonstrating that the impacts of noise levels, air quality and dust emissions, light pollution and vibration are acceptable),

2. The health of local residents adjoining the site,

3. The quality and quantity of water within water courses, groundwater and surface water,

4. Drainage systems,

5. The soil resource from the best and most versatile agricultural land,

6. Farming, horticulture and forestry,

7. Aircraft safety due to the risk of bird strike,

8. The safety and capacity of the road network,

9. Public Open Space, the definitive Public Rights of Way network and outdoor recreation facilities,

10. The appearance, quality and character of the landscape, countryside and visual environment and any local features that contribute to its local distinctiveness,

11. Land stability,

12. The natural and geological environment (including biodiversity and ecological conditions for habitats and species),

13. The historic environment including heritage and archaeological assets.

Spatial Vision: Policy links to the delivery of themes D and I.
Strategic Objectives: Policy links to the delivery of objectives 3, 5, 6, 10, 11 and 12

Policy DM2- Planning Conditions and Legal Agreements

When granting planning permission for minerals developments, the Minerals Planning Authority will impose conditions and/ or require legal agreements to mitigate and control the effects of the development and to enhance the environment.

Spatial Vision: Policy links to the delivery of themes D and I.
Strategic Objectives: Policy links to the delivery of objectives 3, 5, 6, 10, 11 and 12.

Mineral Processing and Aggregate Production

Primary Processing Plant

5.63 Primary processing enables a higher value use of aggregates. Technological improvements in recent years allow smaller and more mobile plant to be brought onto relatively small mineral sites. Encouraging such on site processing reduces the number of lorry movements on the road network. The importation of non-indigenous material can increase vehicle movements and extend the overall life of a quarry and therefore restricting importation gives clarity to the working programme, the life of the quarry, and associated vehicle movements.

5.64 All applicants will be required to demonstrate how extracted mineral is to be used in an efficient way by making provision for on-site primary processing plant. Where there is an existing neighbouring processing plant which could process the additional material without impacting on its own working timetable, nor result in unacceptable adverse impacts, this too may be considered a sustainable option.

5.65 It is recognised that limited imports could enable the blending of minerals to produce a broader range of construction products. This, in itself, may be considered a way of making more efficient use of extracted mineral. However, there is a need to avoid the generation of additional and non-essential mineral movements to keep environmental and community impacts to a minimum.

5.66 Imports should continue to be justified on a site by site basis, and that, in all cases, the main use of the primary plant should be to continue to process the indigenous mineral that is extracted from within the site's boundary. The primary plant is at that location by virtue of the mineral extraction that is taking place there and it will be required to be removed upon completion of the mineral workings. This is to ensure an industrial use is not developed, on a permanent basis, in a locality which would normally be considered inappropriate, such as in a largely rural location.

5.67 The movement of mineral between separate sites, purely to increase the range of products available for sale at any particular site, is normally not considered acceptable, especially given the impact the additional HGV movements would have.

5.68 Careful consideration will be given to the siting of plant and buildings. Normally processing plant ancillary to extraction does not need 'express planning permission' and is generally permitted by the General Permitted Development Order. Nonetheless, in exceptional circumstances, particularly in exposed or sensitive locations, these 'permitted development' rights may be removed to control the siting, location and impact of such plant at mineral sites.

5.69 Note: Where no primary processing plant is proposed details will be required of the proposed destination of the mineral for processing to demonstrate the material will be used in an efficient way.

Policy DM3- Primary Processing Plant

Proposals for minerals extraction will be permitted where the primary processing plant and equipment is located within the limits of the mineral site's boundary and the plant would not have any unacceptable impact on local amenity and/ or the surrounding environment.

Proposals for extension sites shall be expected to include the location of the existing processing plant and access arrangements within the planning application.

Where it is demonstrated that the positioning of the primary processing plant within the boundary of the mineral site is not feasible, the exportation of mineral from the site shall not have an unacceptable impact upon amenity and/ or the safety, efficiency and capacity of the road network.

Minerals shall only be imported to a minerals site, from non-indigenous sources, when it is demonstrated that there are exceptional circumstances or overriding benefits from doing so.

In all cases permission will only be granted for a temporary duration so as not to delay restoration of the site.

Spatial Vision: Policy links to the delivery of themes A and D.
Strategic Objectives: Policy links to the delivery of objectives 3, 4, 11,12, and 13.

Secondary Processing Plant

5.70 Secondary processing plant, such as for mortar or concrete batching, the manufacture of coated materials (asphalt), block/ tile/ brick making and other concrete products appear on mineral, industrial and transhipment sites, and are currently well spread across the County.

5.71 Where primary processing plant is proposed at mineral extraction sites, there may be justification for secondary plant provided that the plant is utilising mainly indigenous mineral sourced from within the site and/ or aggregates from the primary processing plant. Such secondary plant should be for a temporary duration and will be required to be removed from the land upon completion of mineral extraction, with the land subsequently restored to an appropriate after-use within a reasonable timescale following the completion of extraction. Normally, proposals for secondary processing/ treatment facilities within mineral sites will be considered against the relevant development plan policies for industrial uses in rural areas.

Policy DM4- Secondary Processing Plant

Proposals for the secondary processing and/ or treatment of minerals will only be permitted at mineral sites where it can be demonstrated that there would be no unacceptable impact upon amenity and/ or the local environment and/ or the safety, efficiency and capacity of the road network.

The minerals for secondary processing and/or treatment shall be sourced from within the boundary of the mineral working within which the plant is located unless it is demonstrated that there are exceptional circumstances or overriding benefits from sourcing materials from elsewhere to supplement indigenous supply, subject to no unacceptable adverse impacts.

In all cases permission will only be granted for a temporary duration so as not to delay restoration of the site.

Spatial Vision: Policy links to the delivery of themes A and D.
Strategic Objectives: Policy links to the delivery of objectives 3, 4, 11,12, and 13

6.0 Implementation, monitoring and review

6.0 Implementation, monitoring and review

Introduction

6.1 The Minerals Local Plan must show how the Vision, objectives and core strategy will be delivered, by whom, and by when. It is important that all parties essential to the delivery of the plan, including landowners, mineral operating companies and developers are signed up to it.

6.2 The following table details the current mineral companies with whom ECC will be required to work with, their sites, and whether the site is currently being worked or whether it was selected as a Preferred or Reserve Site for future working.

6.3 The Table below denotes existing permitted sites, the new Preferred and Reserve Sites as allocated within this Plan and as set out in Section 4 and Tables 5 and 6, and the current mineral operator assigned with that site. 'Preferred and Reserve Sites' for future mineral extraction will only be developed if brought forward by the respective mineral operator (with the landowners' support). The mineral operator's first task will be to secure full planning permission for mineral extraction from their site. The listing of a site as 'Preferred' in the following table does not equate to a permission to extract.

Table 7. Existing, Preferred and Reserve Sites(7)

Site Operator	Sites	Existing, Preferred or Reserve Site
Aggregate Industries	Martells Quarry, Ardleigh	Existing
	Park Farm, Ardleigh (B1) (Extension to Martells Quarry)	Preferred
Blackwater Aggregates	Bradwell Quarry, Rivenhall Airfield	Existing
	Bradwell Quarry, Rivenhall Airfield (Sites A2-A5) (Extension to Bradwell Quarry)	Preferred
	Bradwell Quarry, Rivenhall Airfield (Sites A6 and A7) (Extension to Bradwell Quarry)	Reserve

(7) Existing sites as of 31 December 2012

Site Operator	Sites	Existing, Preferred or Reserve Site
Brett Aggregates	Alresford Creek, Alresford	Existing
	Brightlingsea Quarry, Brightlingsea	Existing
	Elsenham Quarry	Existing
	Lufkins Farm, Thorrington	Existing
Carr and Bircher	Widdington Pit, Widdington	Existing
Danbury Aggregates	St Cleres, Danbury	Existing
	Royal Oak, Danbury	Existing
Dewicks	Curry Farm, Bradwell-on-Sea	Existing
Edviron	Crumps Farm, Great Canfield	Existing
	Little Bullocks Farm, Gt & Lt Canfield (A22 & A23) (Extension to Crumps Farm)	Preferred
Frank Lyons Plant Services	Blackley Quarry, Great Leighs	Existing
	Blackley Quarry, Great Leighs (A38 & A39) (Extension to Blackley Quarry)	Preferred
G&B Finch	Asheldham Quarry, Asheldham	Existing
Gent Fairhead & Co Ltd	Rivenhall Airfield (Waste Facility)	Existing
Hanson Aggregates	Birch Quarry, Birch	Existing
	Maldon Road, Birch (A31) (Extension to Birch Quarry)	Preferred
	Bulls Lodge Quarry, Boreham	Existing

Site Operator	Sites	Existing, Preferred or Reserve Site
Lafarge Tarmac	Wivenhoe Quarry, Wivenhoe	Existing
	Sunnymead, Elmstead and Heath Farm, Alresford (A20) (Extension to Wivenhoe Quarry)	Preferred
	Broadfield Farm, Rayne (A9) (New Site)	Preferred
	Shellow Cross Farm (A40) (New Site)	Preferred
	Colchester Quarry, Stanway	Existing
	Fiveways Fruit Farm (A13) (Extension to Colchester Quarry)	Preferred
Sewells Reservoir Construction	Cobbs Farm, Goldhanger	Existing
	Crown Quarry, Ardleigh	Existing
	Highwood Quarry, Little Easton	Existing
SR Brice	Colemans Farm, Rivenhall End (A46) (New Site)	Preferred
JJ Prior Transport Ltd	Fingringhoe Quarry, Fingringhoe	Existing

Implementation

6.4 Subject to planning permission being granted, and based on the information provided by Site Promoters, the 'Preferred and Reserve Sites' would come into operation in a phased manner across the plan period. Phasing information was provided to the Council by Site Promoters and it is considered unnecessary to control the release of Preferred Sites beyond being subject to external market forces. However for Reserve Sites it is considered necessary that need for their extraction should be demonstrated to ensure that oversupply does not take place. It is considered that the indicative phasing is such that sand and gravel will be available to serve the Essex market throughout the plan period.

6.5 The continued growth of the County should not be hindered by a lack of appropriate aggregates from Essex sources. The Council will seek to work closely with local stakeholders and the minerals and waste industry in order to provide appropriate advice prior to the submission of any application for new mineral extraction or aggregate recycling. The intent will be to ensure the efficient running of the planning process and guarantee that there is a continual flow of extracted mineral to facilitate growth supporting development.

6.6 Should mineral demand within Essex fall it is unlikely that this would result in a mass exportation of mineral outside of the county. Minerals are not economic to transport significant distances by road and due to the pattern of infrastructure within the county, there is a necessary reliance on the road network for mineral movements. For economic reasons it is also considered unlikely that a mineral operator would continue to excavate and subsequently stockpile mineral that could not be sold.

6.7 Key new infrastructure such as new roads or railheads are unlikely to be required to deliver the Vision and objectives of the spatial strategy other than specific sites needing to put acceptable access arrangements in place. However, loss of port and/ or rail facilities for aggregate handling could hinder the delivery of the Plan, and so this will be monitored particularly carefully.

6.8 Other aspects of delivery include ensuring a greater use of recycled aggregate products through public sector procurement, and restored minerals sites contributing to the achievement of priority habitat creation targets. These matters have been discussed in detail in previous sections.

Monitoring and Review

6.9 Monitoring is important to understand the characteristics of an area, assessing the impact of policies upon this area and consequently whether the strategy is delivering sustainable development. The data collected through monitoring therefore allows for a review, and subsequently a potential modification, of the policies contained within this Plan.

6.10 The planned approach is based on the evidence available at the time of plan preparation. However, as the data that has informed plan preparation changes and is updated over time there will be a need to monitor what is happening and to respond in the most appropriate way.

6.11 The Council is required to produce an Annual Monitoring Report (AMR) to review the progress of Local Development Documents against the milestones set out in the Local Development Scheme and assess the extent to which the policies in these documents are being achieved.

6.12 A comprehensive suite of performance indicators and targets has been developed to help inform the monitoring process and these will provide the basis for the AMR. These will integrate with national indicators and targets as appropriate, whilst if national indicators change then the monitoring framework will be amended to adjust to the new indicators. Dialogue with, and Annual Monitoring Reports (AMR) of, the district/ borough/ city councils will be examined each year to assess whether the supply of aggregates or the MPA might be restricting housing and/ or commercial developments, and if it is, the MPA's own AMR will consider how the problem could be rectified.

6.13 The proposed monitoring framework addresses the target to create a minimum of 200 hectares of UK priority habitat creation in Essex by 2029 through mineral site restoration or through contributions to support off-site enhancements in proximity to the extraction site. This is expressed in Policy S12. Of this 200ha target, 60ha is to be comprised of open mosaic habitats (essentially a mixture of habitats) on previously developed land, 50ha is to be restored to lowland heath and lowland dry acid grassland and a further 50ha to reed beds.

6.14 A full plan review will take place within five years of the date of adoption of the plan, and within five years of each previous review, as part of a monitor and manage approach to forward planning. Data gathered through the monitoring framework will be used to ascertain whether the plan is being effective in its contribution to facilitating sustainable growth and development. A second trigger is also in place; should annual monitoring show a fall in either the sand and gravel, silica sand or brick clay land banks to below the national minimum requirement of seven years, ten years and 25 years respectively, a review of the plan will also be initiated.

6.15 Additionally, the NPPF introduced the requirement to produce a Local Aggregate Assessment (LAA) to assist in the planning of a steady and adequate supply of aggregates. The LAA produced to aid in the monitoring of the MLP includes an assessment of a rolling ten year's average of sand and gravel sales, and this will be updated annually. The resulting averages will be compared to our planned provision and Permitted Reserves to ensure that Essex supplies appropriate mounts of mineral to facilitate sustainable development. The assessments made by the LAA will be taken into account when the Minerals Local Plan itself is subjected to full review under the parameters set out in the preceding paragraph.

Table 8. Minerals Local Plan Monitoring Framework

	Indicator	Related Policy	Target	Implementation	Data Source	Frequencey of Monitoring	Responsibility
1	Production of primary land won aggregates by the MPA	Policy S6: Provision for Sand and Gravel Extraction & Policy S7: Provision for Industrial Minerals	The figure of 4.31mtpa is not a production target, but will be a factor in assessing the relationship with the sub-national apportionment.	In industry control, influenced by market demands and the requirements of any windfall schemes.	Mineral industry returns.	Annually (via established annual survey for AWP/ CLG and LAA)	ECC and mineral operators.
2	The need for a separate landbank for building sand	Policy S6: Provision for Sand and Gravel Extraction	Establish a consistent baseline of building sand sales and reserves in Essex over a 5 year time frame. This will be a factor in assessing whether a separate building sand landbank can be established.	Engaging with the minerals industry to establish sales/ reserves of building sand	Mineral industry returns.	Annually through AMR.	ECC and mineral operators.

	Indicator	Related Policy	Target	Implementation	Data Source	Frequencey of Monitoring	Responsibility
3	Contribution of marine dredged sources towards overall aggregate provision	Policy S6: Provision for Sand and Gravel Extraction.	That if marine imports come within 90% of wharf capacity in Greater Essex then a review is undertaken to determine whether capacity is constraining the landing of marine dredged aggregate and the potential for increasing capacity at either existing or new transhipment sites.	Engaging with the minerals industry, adjoining port and district authorities where landings occur to retain or increase existing processing capacity.	Bespoke investigation of wharf capacity	Annually through AMR.	ECC, minerals industry, adjoining authorities and port companies.

	Indicator	Related Policy	Target	Implementation	Data Source	Frequencey of Monitoring	Responsibility
4	Production of secondary and recycled aggregates by MPA.	Policy S5: Creating a Network of Aggregate Recycling Facilities & Policy S4 Reducing the Use of Mineral Resources	Ensuring a 'capacity gap' (8) does not occur.	Through granting of planning permission (subject to environmental considerations).	Planning applications and decisions.	Annually through AMR and LAA.	ECC and waste/ mineral operators.
5	Size of landbank	Policy S6: Provision for Sand and Gravel Extraction	Maintenance of a 7 year landbank based on a production potential of 4.31mtpa	Bringing forward unimplemented Preferred or Reserve Sites when the landbank is below 7 years.	Mineral industry returns and details of new permissions.	Annually (via established annual survey for RAWP / DCLG and LAA).	ECC and mineral operators.
6	Locations of new recycling facilities in accordance with spatial strategy.	Policy S5: Creating a Network of Aggregate Recycling Facilities	SARS in proximity to all key centres for growth and development.	Planning authority will support in principle applications in accordance with strategy.	Planning applications and decisions.	Annually through AMR.	ECC

(8) ref: Waste Local Plan

	Indicator	Related Policy	Target	Implementation	Data Source	Frequencey of Monitoring	Responsibility
7	Locations of new extractions in accordance with spatial strategy.	Policy S2: Strategic Priorities for Minerals Development	All permissions (other than windfalls) to be on identified sites in Essex	Planning authority will support in principle applications which accord with the strategy.	Planning applications and decisions.	Annually through AMR.	ECC
8	Number of safeguarded depots/ wharves lost to other uses.	Policy S9: Safeguarding Mineral Transhipment Sites and Secondary Processing Facilities	Nil.	Planning authority will raise objection to applications that would cause sites to be lost.	Planning applications and decisions.	Annually through AMR.	ECC and district councils.
9	Area of commercial mineral deposits sterilised by non-mineral development.	Policy S8: Safeguarding Mineral Resources and Mineral Reserves	Nil.	MSAs to be identified by ECC, and objections raised to applications within them that would sterilise deposits.	Planning applications and decisions.	Annually through AMR.	ECC and district councils.

	Indicator	Related Policy	Target	Implementation	Data Source	Frequencey of Monitoring	Responsibility
10	Number of applications proposing non-road modes of transport of material (a) to or from the site (b) within the site	Policy S11: Access and Transportation	Maximisation.	Use of non-road modes to be encouraged through the DM process.	Planning applications and decisions.	Annually through AMR.	ECC
11	Amount of land newly restored for habitat creation.	Policy S12: Mineral Site Restoration and After-Use	To create a minimum of 200 hectares of UK priority habitat through mineral site restoration or through contributions to support off-site enhancements in proximity to the extraction site.	ECC to promote through DM process and in subsequent site monitoring.	Planning applications and decisions, and on-site monitoring of progress.	Annually through AMR	ECC and site operators.

Policy IMR1- Monitoring and Review

The Plan will be monitored and reviewed within five years of adoption as part of a "plan, monitor, and manage" approach to forward planning, or should the landbank fall below the minimum requirement, whichever comes sooner.

Spatial Vision: Policy links to the delivery of theme B
Strategic Objectives: Policy links to the delivery of objectives 3,4 and 10

7.0 Reference material

7.0 Reference material

This glossary of terms used in this Document is not intended as a source for statutory definitions, and should not be used as such. A more comprehensive planning glossary can be found at www.planningportal.gov.uk.

Also listed are links to some of the main legislation and guidance documents relevant to this Document.

Term	Definition
Aftercare (in terms of minerals and waste operations)	The steps to be taken following restoration to bring land to the required standard for its intended use once mineral working or landfill has taken place, and its subsequent maintenance.
Aggregates	Sand, gravel, crushed rock and other bulk materials used by the construction industry.
Aggregate Working Party	Established in the 1970's to identify and consider problems in the supply of aggregates. They provide technical advice in relation to the supply of, and demand for, aggregates (including sand, gravel and crushed rock) to the Secretary of State, local government and mineral planning authorities.
Ancient Woodland	Woodland that is believed to have existed from at least 1600AD.
Annual Monitoring Report	A yearly report submitted to the government by the Local Planning Authority/ Minerals Planning Authority assessing progress with, and the effectiveness of, the Local Development Framework.
Apportionment (amount of minerals needed)	The splitting of national supply guidelines for minerals demand between Minerals Planning Authorities or sub regions.
Appropriate Assessment	The process and documentation associated with the statutory requirement under the EU Appropriate Assessment Habitats and Species Directive.
Area Action Plan	A type of Development Plan Document focused upon a specific location or an area subject Area Action Plan to conservation or significant change (for example major regeneration).
Archaeological Assessment / Evaluation	An assessment of the potential archaeological interest of a site or building. This can be either a desk-based assessment or a field assessment, involving ground survey and small-scale pits or trial trenching carried out by professionally qualified archaeologist(s) looking for historical remains.
Archaeological Reserve	A non-statutory designation for protecting archaeological remains.
Area of Outstanding Natural Beauty	An area with a statutory national landscape designation, the primary purpose of which is to conserve and enhance natural beauty. Together with National Parks, AONBs represent the nation's finest landscapes.

Term	Definition
Article 4 Direction	Direction removing some or all Permitted Development rights, for example within a conservation area or curtilage of a listed building. Article 4 directions are issued by local planning authorities.
Authority	Used in the sense of “local authority” or “local planning authority” (LPA), this normally refers to the district, unitary or county council which has direct decision-making responsibilities for planning matters.
Best and Most Versatile Agricultural Land	Land identified by the Department for Environment, Food and Rural Affairs (Defra) as falling within classification grades 1, 2 or 3a, based on the physical characteristics of the land and the limits these impose upon its agricultural uses.
Biodiversity Action Plan	A strategy prepared for a local area aimed at conserving and enhancing biological diversity.
Borrow Pit	A temporary mineral working to supply material for a specific construction project.
Buffer Zone	An area of land separating certain types of development from adjoining sensitive land uses. Often used in relation to minerals and/ or waste development.
Bund	An artificial mound or embankment used to either screen a site from view, or reduce noise emissions.
Climate Change Adaptation	A response to the effects of climate change which seeks to reduce the vulnerability of both the biological and built environment to climate change effects
Community Strategy	A strategy prepared by a Local Authority to improve local quality of life and aspirations, under the Local Government Act 2000.
Conservation Area	Areas of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance.

Term	Definition
Construction, Demolition and Excavation Wastes	Controlled waste arising from the construction, repair, maintenance and demolition of buildings and structures and the excavation of minerals. It mostly includes brick, concrete, hardcore, subsoil and topsoil, but can include timber, metal, plastics and occasionally special hazardous waste materials.
Core Strategy (Minerals Core Strategy)	Sets out the long-term spatial vision for the Local Planning Authority area and the strategic policies and proposals to deliver that vision.
County Council (Essex County Council)	The Local Authority responsible for waste and minerals planning functions in non-unitary, and non-national park, local authority areas.
Cumulative Impact	A number of developments in a locality or a continuous activity over time that together may have an increased impact on the environment, local community or economy
Deconstruction	The selective dismantling of a building, specifically preserving mineral and other construction materials for re-use and recycling. It differs from demolition where a site is cleared of its building by the quickest and most cost effective means.
Department of Communities and Local Government	'Communities and Local Government' is the successor department to the Office of the Deputy Prime Minister (ODPM). It is an expanded department with a powerful new remit to promote community cohesion and equality, as well as responsibility for housing, urban regeneration, planning and local government. It provides policy guidance within the National Planning Policy Framework (NPPF) and Planning Policy Statements (PPSs); also previous guidance in the form of Minerals Policy Statements (MPSs) and Planning Policy Guidance (PPG) that are now largely cancelled.
Development Management	The process whereby a Local Planning Authority manages development by considering the merits of a planning application and determines the application, having regard to the Development Plan and all other material considerations.

Term	Definition
Development Plan	A document setting out the local planning authority's policies and proposals for the development and use of land and buildings in the authority's area. This includes adopted Local Plans, neighbourhood plans and the London Plan, and is defined in section 38 of the Planning and Compulsory Purchase Act 2004. (Regional strategies remain part of the development plan until they are abolished by Order using powers taken in the Localism Act.
Development Plan Documents	Development Plan Documents are prepared by local planning authorities and outline the key development goals of the local development framework. Development Plan Documents include the Core Strategy, Development Management policies, site-specific allocations, policies map and, where needed, Area Action Plans.
East of England Aggregates Working Party	The Aggregates Working Party that Essex County Council is a member of through being the Minerals Planning Authority for the county.
Enforcement	Procedures by a Local Planning Authority to ensure that the terms and conditions of a planning decision are carried out, or that development carried out without planning permission is brought under control.
English Heritage	Government advisors with responsibility for all aspects of protecting and promoting the historic environment. English Heritage is responsible for advising the government on the listing of historic buildings.
Environment Agency	A government body that aims to prevent or minimise the effects of pollution on the environment and issues permits to monitor and control activities that handle or produce waste. It also provides up-to-date information on waste management and deals with other matters such as water issues, including flood protection advice.

Term	Definition
Environmental Impact Assessment and Environmental Statement (ES)	Applicants for certain types of development, usually more significant schemes, are required to submit an environmental statement accompanying a planning application. This evaluates the likely environmental impacts of the development, together with an assessment of how the severity of the impacts could be mitigated.
Equality Impact Assessment	An assessment made on a policy document to ensure that the policies contained within would not discriminate against any groups categorised as being disadvantaged or vulnerable.
Essex Rural Strategy	Document setting out the partnership priorities for the future of Rural Essex. A copy can be reviewed at http://www.essexruralpartnership.org.uk/About_Us/Essex_Rural Strategy.aspx
Examination in Public	A term given to the public examination of Development Plan Documents
Flood Risk Assessment	An assessment of the flooding risk in a particular area so that development needs and mitigation measures can be carefully considered.
General Permitted Development Order	A set of regulations made by the government which grants planning permission for specified limited or minor forms of development.
Groundwater	An important part of the natural water cycle present underground, within strata known as aquifers.
Habitats Directive	European legislation aiming to protect wild plants, animals and habitats making up our natural environment. For further information, see https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69580/pb13809-habitats-guidance.pdf
Habitats Regulation Assessment	The assessment of the impacts of implementing a plan or policy on a Natura 2000 Site. It considers the impacts of a land use plan against the conservation objectives of the site and ascertains whether any impacts would adversely affect the integrity of the site.

Term	Definition
Highways Agency	An executive agency of the Department of Transport. The Highways Agency is responsible for operating,maintaining and improving the motorway and trunk road network of England.
Industrial Minerals	Minerals which are worked for their commercial value, which are not fuel (fuel minerals or mineral fuels) and are not sources of metals (metallic minerals). The only industrial mineral in Essex is silica sand.
Issues & Options	The pre-submission stages of Development Document production.
Landbank	In the context of the MLP this is the stock of planning permissions for the winning and working of minerals.
Landscape Character	The distinct and recognisable pattern of elements that occur consistently in a particular type of landscape. It reflects particular combinations of geology, landform, soils, vegetation, land use and human settlement.
Lawful Development Certificate	A certificate issued by a Local Planning Authority, on application, stating that an existing or proposed use or other forms of development can be considered as lawful for planning purposes.
Listed Building	A building of special architectural or historic interest. Listed buildings are graded I, II* or II with grade I being the highest. English Heritage is responsible for designating buildings for listing in England. See also Planning (Listed Buildings & Conservation Areas) Act 1990 at www.opsi.gov.uk/acts/acts1990/Ukpga_19900009_en_1.htm
Living Carbon Sink	Carbon Sinks are reservoirs which accumulate and store carbon compounds for an indefinite period, including removing carbon dioxide from the atmosphere. Living Carbon Sinks are natural reservoirs and include forests and reedbeds.
Local Aggregate Assessment	Aids in the planning of a steady and adequate supply of minerals by assessing historic sales data and accounting for all potential supply options. The assessment is produced by the MPA and incorporates the advice of the relevant AWP.

Term	Definition
Local Development Documents	These include Development Plan Documents (which form part of the statutory Development Plan) and Supplementary Planning Documents (which do not form part of the statutory Development Plan). LDDs collectively deliver the spatial planning strategy for the local planning authority's area.
Local Development Framework	The Local Development Framework (LDF) is a non-statutory term used to describe a folder of documents, which includes all the local planning authority's local development documents, other relevant authorities development documents, the Annual Monitoring Report and the SCI.
Local Development Order	An order made by a Local Planning Authority extending Permitted Development rights for certain forms of development, with regard to a relevant Local Development Document.
Local Economic Partnership	A partnership between local authorities and businesses which cover natural economic areas. Priorities include ensuring that planning and infrastructure investment supports business need, as well as supporting enterprise, global trade and inward investment.
Local Geological Sites	A non-statutory regionally important geological or geo-morphological site (basically relating to rocks, the Earth's structure and landform).
Local Plan	A Development Plan Document prepared by district and other local planning authorities, including minerals and waste planning authorities, to guide development in their administrative area.
Local Plan Regulations 2012	Govern the process by which local councils prepare Development Plan Documents and how these documents should be consulted upon.
Local Planning Authority	The local authority or council that is empowered by law to exercise planning functions. Often the local borough/ district/ city council. County councils are the authority for waste and minerals matters.

Term	Definition
Local Validation Checklist	The validation checklist is a list of national and local requirements which have to be submitted to Essex County Council as part of a planning application. The NPPF requires all Local Planning Authorities to publish a validation checklist, to help applicants submit the right information with an application. This ensures ECC is able to deal with applications as quickly and comprehensively as possible. The checklist includes all potential requirements that ECC can ask for, as such not all items within the checklist will be relevant to every type of planning application, so applicants should have pre-application discussions to establish the exact requirements on a site by site basis.
Local Wildlife Sites	Areas of land with significant wildlife value. These were previously known as Sites of Importance for Nature Conservation (SINCs) and County Wildlife Sites (CWSs)
Localism Act 2011	The Localism Act seeks to give effect to the Government's ambitions to decentralise power away from Whitehall and back into the hands of local councils, communities and individuals to better work on local priorities.
Low Level Restoration	The re-establishment of land following mineral extraction to a lower level with partial or no infilling (filling the hole created by extraction).
Main Road Network	The road network excluding secondary distributor roads, estate roads and other routes that provide local access.
Material Consideration	A matter that should be taken into account in deciding a planning application or on an appeal against a planning decision
Mineral Consultation Area	An area identified in order to ensure consultation with the relevant Minerals Planning Authority, on applications for non-mineral development in that area.
Minerals Development	Any development primarily involving the extraction, processing, storage, transportation or manufacture of minerals. It includes associated minerals development such as rail aggregate depots, facilities for aggregate recycling, secondary processing facilities and coastal wharves for mineral transhipment.

Term	Definition
Mineral Extraction	Refers to the quarrying of mineral and the ancillary development associated with this such as processing plants, site offices and weighbridges.
Minerals Hierarchy	The minerals hierarchy sets out the different approaches to the supply of minerals, and orders them in terms of their sustainability. The most sustainable option is to reduce the amount of minerals used, followed by sourcing minerals from secondary and recycled materials, and finally through the primary extraction of minerals.
Minerals Local Plan	A statutory development plan prepared by a Minerals Planning Authority setting out policies for the control of development constituting of the winning and working of minerals, or the deposit of mineral waste.
Mineral Planning Authority	The planning authority responsible for planning control of minerals development. Essex County Council is the MPA for Essex.
Mineral Products Association	National trade association for companies involved in the supply of minerals such as sand and gravel. See http://www.mineralproducts.org/ for more information.
Mineral Resource	A potential mineral deposit where the quality and quantity of material present has not been tested.
Mineral Reserves	Mineral deposits which have been tested to establish the quality and quantity of material present and which could be economically and technically exploited.
Mineral Safeguarding Area	An area designated by Minerals Planning Authorities which covers known deposits of minerals which are desired to be kept safeguarded from unnecessary sterilisation by non-mineral development.
Mineral Working Environmental Awards Scheme	Event set up every 2 years by ECC in conjunction with the Mineral Products Association, recognising sites judged to operate in the most environmentally sensitive manner. See http://www.essex.gov.uk/Environment%20Planning/Planning/Minerals-Waste-Planning-Team/Planning-Applications/Planning-Process/Site%20monitoring/Pages/Environmental-Award-Scheme.aspx

Term	Definition
Minerals & Waste Development Scheme	The programme for producing Minerals and Waste Development Documents.
National Nature Reserves	Areas designated with the aim of securing protection and appropriate management of the most important areas of wildlife habitat, and to provide a resource for scientific research. All National Nature Reserves are Sites of Special Scientific Interest.
National Planning Policy Framework	Sets out the Government's planning policies for England and how these are expected to be applied. It provides a framework within which local people and their accountable councils can produce their own distinctive local and neighbourhood plans, which reflect the needs and priorities of their communities.
Natura 2000	An ecological network of protected sites, comprising of Special Protection Areas (sites important for bird populations) and Special Areas of Conservation (designated for all species other than birds, and their habitats).
Natural England	Body formed by bringing together English Nature, the landscape, access and recreation elements of the Countryside Agency and the environmental land management functions of the Rural Development Service. For further information, see https://www.gov.uk/government/organisations/natural-england
Office of the Deputy Prime Minister	See Department of Communities & Local Government.
Overburden	Soil and other material that overlay a mineral deposit, and which has to be excavated and either tipped or stockpiled to gain access to the underlying mineral.
Permitted Reserves	Mineral deposits with the benefit of planning permission for extraction.
Planning & Compulsory Purchase Act 2004	Requires the production of Local Development Frameworks. This requires Development Documents to have a positive spatial strategy and vision for the authority at the end of the plan period, as well as policies for Development Management. See http://www.legislation.gov.uk/ukpga/2004/5/contents for further information.

Term	Definition
Planning Inspectorate	The Planning Inspectorate is the government body responsible for: • the processing of planning and enforcement appeals • listed building consent appeals • advertisement appeals • reporting on planning applications called in for decision by the Secretary of State. • examinations of Development Plan Documents • various compulsory purchase orders, rights of way cases; and cases arising from the Environmental Protection and Water Acts and the Transport and Works Act and other highways legislation are also dealt with. The work is set in agreement with Department for Transport, the Department for Communities and Local Government and the National Assembly for Wales.
Policies Map	A map of the area which the associated Development Plan covers which highlights spatially the operating extent of the policies contained within.
Preferred Site	An area containing mineral resources identified within this Plan where there is a strong presumption in favour of extraction.
Primary Aggregates	Naturally occurring sand and gravel, and crushed rock, used for construction purposes. Crushed rock does not exist in economically viable deposits within Essex and needs to be imported.
Protected Species	Plants and animal species afforded protection under certain Acts and Regulations.
Public Right of Way	A Public Right of Way is a highway over which the public have a right of access along the route.
Ramsar Sites	Sites designated under the European Ramsar Convention to protect wetlands that are of international importance, particularly as waterfowl habitats.

Term	Definition
Recycled Aggregates	Aggregates comprising waste materials (for example damaged bricks, broken concrete, brickwork, masonry and tarmac) from roads, construction and demolition sites that have been recovered and recycled in the form of manufactured materials such as concrete, brick, plasterboard and ceramic articles.
Reserve Site	An area containing mineral resouces identified within this Plan where the planning principle for extraction has been established but mineral cannot be released for extraction (permission granted) until the landbank falls below 7 years.
Restoration (in terms of minerals operations)	The method used to positively enhance a site once mineral extraction has ceased. This could be to restore the site to its original state or another suitable use, by filling the void to former levels, flooding the void or using low level restoration techniques.
Saved Policies / Saved Plan	Policies within unitary development plans, local plans and structure plans that are in force until such time as Local Development Documents are adopted.
Secondary Aggregates	Includes by-product wastes from industrial processes, synthetic materials and soft rock used with or without processing as aggregate or cement additives.
Secretary Of State for Communities and Local Government	The lead Minister for all policies relating to Town & Country Planning, having powers of intervention on Development Plans and Planning Casework under certain circumstances.
Site of Special Scientific Interest	A site identified under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000) as an area of special interest by reason of any of its flora, fauna, geological or physiographical features (basically, plants, animals, and natural features relating to the Earth's structure).
Source Protection Zone	The Environment Agency identifies Source Protection Zones to protect groundwater (especially public water supply) from developments that may damage its quality.
Special Area Of Conservation	A site designated under the European Community Habitats Directive, to protect internationally important natural habitats and species.

Term	Definition
Soundness	A Development Plan Document is considered sound if it is based upon good evidence and has been prepared in accordance with all the necessary procedures including the measures set out in the authority's Statement of Community Involvement.
Spatial (Planning)	Spatial planning goes beyond traditional land use planning, bringing together and integrating policies for the development and use of land with other policies and programmes which influence the nature of places and how they function.
Special Protection Areas	Sites classified under the European Community Directive on Wild Birds to protect internationally important bird species.
Statement of Community Involvement	The Statement of Community Involvement sets out the processes to be used by the Local Authority in involving the community in the preparation, alteration and continuing review of all Local Development Documents and development management decisions.
Statement of Compliance	A report or statement issued by local planning authorities explaining how they have complied with their Statement of Community Involvement during consultation on Local Development Documents.
Statutory	Required by law (statute), usually through an Act of Parliament.
Statutory Body	A government-appointed body set up to give advice and be consulted for comment upon development plans and planning applications affecting matters of public interest. Examples of statutory bodies include: Countryside Agency, English Heritage, Environment Agency, Health & Safety Executive, Natural England, Regional Development Agency, and Sport England.
Statutory Undertakers	Bodies carrying out functions of a public character under a statutory power. They may either be in public or private ownership and include the Post Office, the Civil Aviation Authority, the Environment Agency and any water undertaker, public gas transporters and suppliers of electricity, amongst others.
Sterilisation	When development or land use changes prevent possible mineral exploitation in the foreseeable future.

Term	Definition
Strategic Environmental Assessment	SEAs integrate environmental considerations into the preparation and adoption of plans and programmes. They are required by the European Directive 2000/42/EC "on the assessment of the effects of certain plans and programmes on the environment" (the SEA Strategic Environmental Assessment Directive). Government guidance considers that it is possible to satisfy the requirements for Sustainability Appraisal and SEA through a single approach provided that the requirements of the SEA Directive are met. The environmental, economic and social effects of the plan are presented in the form of an iterative Environmental Report which informs each consultation stage of the Minerals Local Plan's development.
Submission Document	A Development Plan Document submitted to the Secretary of State for independent examination by a government-appointed planning inspector.
Submission of Details	The formal submission of a scheme / information for the approval of the planning authority in order to address the requirements of a planning condition.
Supplementary Planning Document	A Supplementary Planning Document is a Local Development Document that may cover a range of issues, thematic or site specific, and provides further detail of policies and proposals in a parent Development Plan Document.
Sustainable Drainage System	A drainage system which slows down rainwater run-off from a development and therefore minimising or preventing flooding events. Some SuDS can also remove pollutants from surface water run-off.

Term	Definition
Sustainability Appraisal	Sustainability Appraisals examine the effects of proposed plans and programmes taking into account environmental, economic and social considerations in order to promote sustainable development in accordance with the Planning and Compulsory Purchase Act Sustainability Appraisal 2004 (as amended). Government guidance considers that it is possible to satisfy the requirements for SA and Strategic Environmental Assessment through a single approach provided that the requirements of the SEA Directive are met. The environmental, economic and social effects of the plan are presented in the form of an iterative Environmental Report which informs each consultation stage of the Minerals Local Plan's development.
Town & Country Planning (Local Planning)(England) Regulations 2012	The formal regulations setting out the scope of local development documents and the process for preparing them, including consultation, the examination of DPDs, publication and notification arrangements.
Traffic Assessment	The Local Validation Checklist states that a Transport Assessment (TA) is to be required where there is likely to be a significant amount of traffic generated. This is defined as generating in excess of 50pcu (passenger car units) in the peak hour. PCU's are a Traffic Assessment calculation of all types of vehicles as car equivalents: an HGV is 2 car units. Mineral sites generate few car movements, but often significant volumes of HGV traffic. This can have major impacts on neighbouring residents and businesses, and is often the cause of most local concern. A TA forms part of an Environmental Statement submitted with most applications requiring Environmental Impact Assessment (EIA). However smaller developments not requiring an EIA do not submit a TA.

Term	Definition
Traffic Impact Assessment	An assessment of the effects upon the surrounding area by traffic as a result of a development, such as increased traffic flows that may require highway improvements.
Traffic Statement	A short, straightforward document, dealing with impacts on the transport network accompanying planning applications without providing detailed capacity assessments. A TS is required by the new validation checklists (June 2008) for all development that fall beneath the threshold for a TA but still have some form of material impact on the highway.
Tree Preservation Order	A mechanism for securing the preservation of single or groups of trees of acknowledged amenity value. A tree subject to a tree preservation order may not normally be topped, lopped or felled without the consent of the local planning authority.
Unauthorised Development	Development that has taken or is taking place without the benefit of planning permission. It may then risk being the subject of enforcement action.
Wildlife & Countryside Act (1981)	Mechanism for the legislative protection of wildlife in Great Britain. See www.jncc.gov.uk/page-1377 for more information.
Wildlife Corridor	Strips of land (for example, along a hedgerow) conserved and managed for wildlife, usually linking more extensive wildlife habitats.
Windfall Site	A site not specifically allocated for development in a development plan, but which becomes available for development during the lifetime of a plan.

Appendices

Appendix One.
Site Profiles for Preferred and Reserve Sites

Site profiles for Preferred and Reserve Sites

This Appendix contains a complete set of individual Site Profiles for each of the proposed Preferred and Reserve Sites subject to Policy P1. Each Site Profile covers the site location, site boundaries, site characteristics, and any detailed development requirements associated with mineral working at each site. In particular, the Mineral Planning Authority would expect these development requirements to be fully addressed at each site when planning applications are prepared and submitted.

- A3 Bradwell Quarry, Rivenhall
- A4 Bradwell Quarry, Rivenhall
- A5 Bradwell Quarry, Rivenhall
- A6 Bradwell Quarry, Rivenhall (Reserve Site)
- A7 Bradwell Quarry, Rivenhall (Reserve Site)
- A9 Broadfield Farm, Rayne
- A13 Colchester Quarry, Fiveways
- A20 Sunnymead, Alresford
- A22 Little Bullocks Farm, Great and Little Canfield
- A23 Little Bullocks Farm, Great and Little Canfield
- A31 Maldon Road, Birch
- A38 Blackley Quarry, Gt Leighs
- A39 Blackley Quarry, Gt Leighs
- A40 Shellows Cross, Roxwell / Willingale
- A46 Land at Colemans Farm
- B1 Slough Farm, Martells

Sites have been assessed for low level restoration (unless specified to the contrary). Details on landfilling proposals are set out in the Essex and Southend-on-Sea Waste Local Plan.

Site Profiles

A3, A4, A5, A6 & A7 Bradwell Quarry, Rivenhall Airfield

A3, A4, A5, A6 & A7: Specific issues to be addressed

The following issues apply to all five sites:

1. Mineral from the site would be processed through the existing processing plant.

2. Mineral traffic would use the existing main site access, and HGV movements would be restricted in line with current levels of working to avoid adverse impacts to the A120. The phasing of site working would need to reflect HGV movement limitations. A Transport Assessment would be required.

3. Improvements to the crossing points at Ash Lane and Church Road would be required.

4. There has been a long history of settlement and occupation within this landscape. A historic environment assessment would be required with any application/ EIA.

5. The sites comprise the best quality Grade 2 agricultural soils and it is expected that these would be retained on site during restoration.

6. A Masterplan would be required covering the Bradwell Quarry in its entirety. This would ensure all pre-extraction activity, site working and restoration is considered as a whole and restoration potential is maximised including the opportunity for significant biodiversity enhancement and habitat creation on site. The first site for Bradwell Quarry for which there is an application (e.g., from the sites A3-A7) should provide indicative phasing/restoration levels/after-uses for all the Bradwell Quarry Preferred and Reserve Sites as part of the Masterplan. The developer shall be expected to enter into a legal agreement to ensure that any subsequent applications for Preferred or Reserve Sites at Bradwell Quarry shall be in accordance with the Masterplan and indicative phasing/ restoration levels/ after-uses. Careful consideration must be given to the final low-level restoration contours to ensure the final landform blends with the surrounding topography and could blend with the levels and planting of the strategic waste management development (Ref ESS/37/08/BTE) if implemented.

A3 Bradwell Quarry, Rivenhall Airfield

Site	A3
Address	Bradwell Quarry, Rivenhall Airfield
District	Braintree
Estimated Yield	1.0mt
Area:	9 ha
Estimated life	1 year
Method of exportation	Road
Method of Restoration	Low level restoration
After-use	Restoration to a range of managed habitats (Inc. arable)

Specific issues to be addressed

Site A3 lies to the east of, and is adjacent to, the current mineral extraction site at Bradwell Quarry.

1. The working and restoration of site A3 and any other Bradwell extension sites,would need to be integrated with and not compromise the permitted strategic waste management facilities at Rivenhall.

2. PROW bridleway Kelvedon 40 crosses the site and would require temporary diversion during operations.

A4 Bradwell Quarry, Rivenhall Airfield

Site	A4
Address	Bradwell Quarry, Rivenhall Airfield
District	Braintree
Estimated Yield	3.0mt
Area:	25.5 ha
Estimated life	3 years
Method of exportation	Road
Method of Restoration	Low level restoration
After-use	Restoration to a range of managed habitats (Inc. arable)

Specific issues to be addressed

Site A4 lies north east of, and is adjacent, to the current mineral extraction site at Bradwell Quarry.

1. Rivenhall Airfield received planning permissions in 2009 & 2010 for the development of a strategic waste management facility. The working and restoration of site A4 and any other Bradwell extension sites would need to be integrated with and not compromise permitted waste development.

2. Adequate stand-off distances/ bunding/ screening would be required to protect Herons Farm and Deeks Cottage on the northern boundary of the site and Haywards Cottage.

3. Appropriate bunding would be required to reduce the impact on the Protected Lane on the northern boundary (Cuthedge Lane).

4. PROW footpaths Bradwell 53 and 68 and Bridleways Bradwell 24, 70 and 81 cross the site and would require temporary diversion during operations. It is envisaged that footpaths would be upgraded to Bridleways (i.e., east to west across the site).

A5 Bradwell Quarry, Rivenhall Airfield

Site	A5
Address	Bradwell Quarry, Rivenhall Airfield
District	Braintree
Estimated Yield	3.0mt
Area:	35 ha
Estimated life	3 years
Method of exportation	Road
Method of Restoration	Low level restoration
After-use	Restoration to a range of managed habitats (Inc. arable)

Specific issues to be addressed

Site A5 lies to the south of the proposed extension Site A2. Sheepcotes Farm, which is a Listed Building, occupied the north-western corner;

1. Rivenhall has recently received planning permissions for the development of a strategic waste management facility. The working and restoration of site A5 and any other Bradwell extension sites would need to be integrated with and not compromise permitted waste development.

2. Existing vegetation screen around Sheepcotes Farm should be protected and retained.

3. There has been a long history of settlement and occupation within this landscape. The site lies in close proximity to a Listed Building, a historic environment assessment which includes details of appropriate restoration to protect the setting of the Listed Buildings must be agreed as part of any application/ EIA.

4. Storeys Wood Local Wildlife Site (BRA 178) abuts the southern east boundary. An appropriate buffer of at least 15m would be required to prevent damage to this site.

5. The site is visible from properties on the edge of Silver End. Measures should be taken to reduce this impact through bunding/ screening.

6. PROW footpaths Silver End 54, 55 and 57 cross the site and would require temporary diversion during operations.

7. Extraction area should be kept away from Sheepcotes Farm or thick advance screen planting will be required.

A6 Bradwell Quarry, Rivenhall Airfield - Reserve Site

Site	A6
Address	Bradwell Quarry, Rivenhall Airfield
District	Braintree
Estimated Yield	2.5 mt
Area:	37.5 ha
Estimated life	2.5 years
Method of exportation	Road
Method of Restoration	Predominately Low level restoration
After-use	Strategic Waste Management facility on the western side. Restoration to a range of managed habitats (Inc. arable) elsewhere

Specific issues to be addressed

Site A6 lies to the east of proposed extension Sites A2/ A5 and south of Site A3. The site encompasses Woodhouse Farm and barn and Allshots Farm and barn (all Grade 2 Listed), a scrapyard and a residential property. The Polish Site is excluded, though surrounded on three sides by the site;

1. Applications for extraction at the site are not supported until such time as the landbank falls below 7 years.

2. Rivenhall has recently received planning permissions for the development of a strategic waste management facility, part of which covers the north-western corner of this site. The working and restoration of site A6, and any other Bradwell extension sites, would need to be integrated with and not compromise permitted waste development.

3. The existing moat at Woodhouse Farm is considered highly sensitive to quarrying activities and measures must be taken to ensure this is not affected, including by dewatering. A basic record of any WW II buildings and structures which survive or may remain within the site should be carried out.

4. The site lies in close proximity to a Listed Building, a historic environment assessment which includes details of appropriate restoration to protect the setting of the Listed Buildings must be agreed as part of any application/ EIA.

5. Storeys Wood Local Wildlife Site (BRA 178) adjoins the southern boundary. An appropriate buffer of at least 15m would be required around this woodland and protection afforded to the woodland contained to the south and west of the site.

6. The ecological compensation area for A2 and strategic waste management facilities within site A6 should be removed from the extraction area.

7. PROW footpath Kelvedon 8 crosses the site and would require temporary diversion during operations.

A7 Bradwell Quarry, Rivenhall Airfield - Reserve Site

Site	A7
Address	Bradwell Quarry, Rivenhall Airfield
District	Braintree
Estimated Yield	6.5 mt
Area:	95 ha
Estimated life	6.5 years
Method of exportation	Road
Method of Restoration	Low level restoration
After-use	Restoration to a range of managed habitats (Inc. arable)

Specific issues to be addressed

Site A7 extends southwards from the Protected Lane (Cuthedge Lane) and eastwards from Sites A3 & A4. The site is not contiguous with current workings and at 6.5 million tonnes it is the largest suggested extension area;

1. Applications for extraction at this site are not supported until such time as the landbank falls below 7 years.

2. Rivenhall has planning permissions for the development of a strategic waste management facility. The working and restoration of site A7 and any other Bradwell extension sites, would need to be integrated with and not compromise permitted waste development.

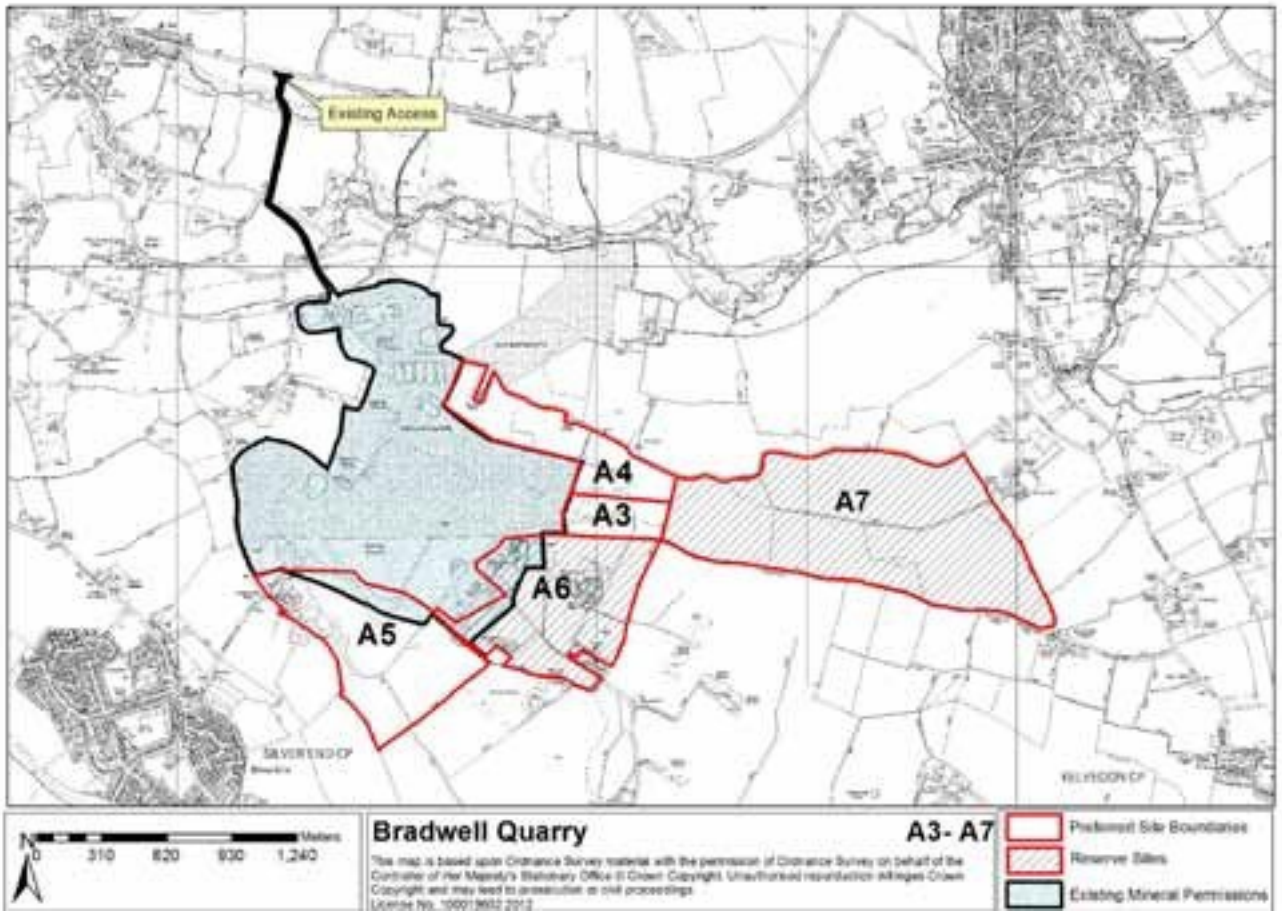
3. There is a high probability of remains of a Roman date surviving to the east of the site.

4. This open site would be overlooked from the Protected Lane along the northern boundary (Cuthedge Lane) and there are a few long views of the site from further north, though generally these are limited because of the landform. The pleasant character of the Bridleway along the southern boundary could be significantly affected by the works. Bunding/ screening would be required on both the northern and southern boundaries.

5. Monks Farm Cottages (Listed Building), located just beyond the south-east corner of the site would require protection, including retention of existing trees to the north west and provision of additional screening.

6. PROW footpaths Kelvedon 2 and 7 cross the site and would require temporary diversion during operations. Bridleway Kelvedon 1 would be protected as detailed above. It is envisaged that footpaths would be upgraded to Bridleway (i.e. east to west across the site).

A3, A4, A5, A6 & A7 Bradwell Quarry, Rivenhall Airfield



A9 Broadfield Farm, Rayne

Site	A9
Address	Broadfield Farm, Rayne
District	Braintree
Estimated Yield	4.2 mt
Area:	90 ha
Estimated life	14 years
Method of exportation	Road
Method of Restoration	Low level restoration
After-use	Restoration to a range of managed habitats (Inc. arable)

Specific issues to be addressed

A new site located to the west of Rayne and east of Blake End. It has been demonstrated that a satisfactory junction arrangement could be provided to serve this site from the B1256. There are no HGV restrictions on the B1256 and westbound vehicles could access the A120 at Great Dunmow. Eastbound vehicles have more direct access to the A120. A very small section of the south-west of the site is within Flood Zones 2 and 3 but extraction is considered compatible with fluvial flood risk.

1. Advance planting is well established on the southern boundary and provides effective screening which would increase with time. The northern area is currently very open and would require appropriate bunding/ screening.

2. Rumley Wood Local Wildlife Site lies 60m beyond the northern boundary and Blackbush Wood Local Wildlife Site 300m to the north-west. An appropriate buffer of at least 15m would be required from both sites to protect them from the impacts of extraction.

3. There is evidence of and potential for protected and notable species on site. An ecological assessment based on appropriate survey work would be required with any application/EIA.

4. A minimum of 100m stand-off distance from the extraction area must be maintained from the closest residential properties, most of which are on Dunmow Road.

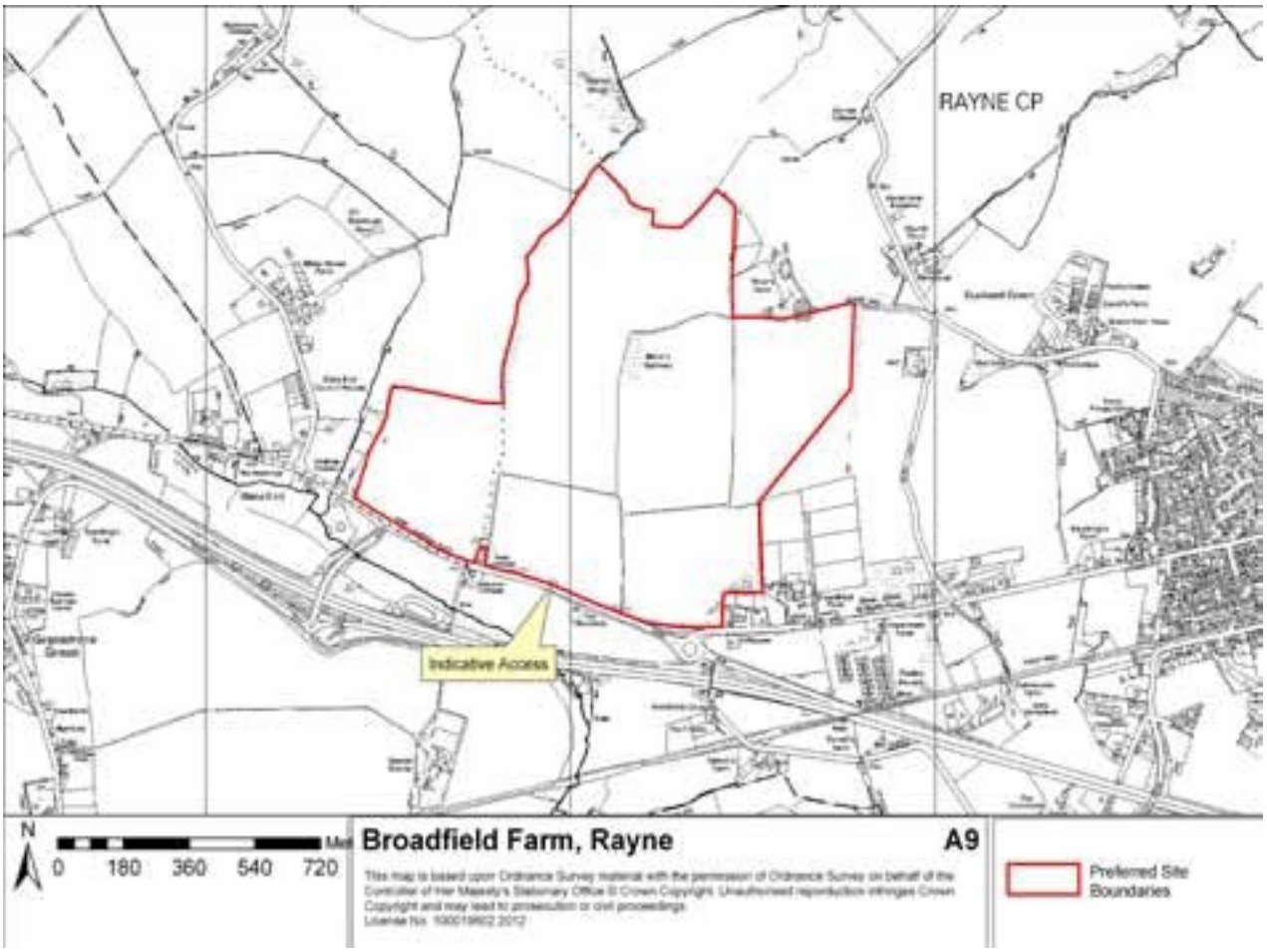
5. There is a high possibility for disturbance of below ground level remains within close proximity to the Roman road, including possible remains of a high status Roman villa and prehistoric and Palaeolithic archaeology. A historic environment assessment would be required with any application/ EIA.

6. A number of water abstraction points lie within close vicinity to the site. A hydro-geological assessment would be required with any application/ EIA.

7. Careful consideration must be given to the final low-level restoration contours to ensure the final landform blends with the surrounding topography and that Grade 2 agricultural soils are retained on site.

8. Restoration provides the opportunity for significant biodiversity enhancement and habitat creation on site, and the addition of a new Public Right of Way from Blake End to Moors Lane.

A9 Broadfield Farm, Rayne



A13 Colchester Quarry, Fiveways

Site	A13
Address	Colchester Quarry, Fiveways
District	Colchester
Estimated Yield	2.95 mt
Area:	15.5ha
Estimated life	6 years
Method of exportation	Road and Rail
Method of Restoration	Part low level, part former levels Predominantly low level
After-use	Green infrastructure & amenity in line with Colchester DPD

Specific issues to be addressed

This site would be a northward extension of the existing extraction site at Colchester Quarry (Stanway). Mineral would be exported via the existing access onto Warren Lane and onward movement would be by road or rail, via Marks Tey rail siding.

1. This site bounds the existing quarry void and if worked would need to be integrated with the restoration of the wider quarry.

2. Planning permission for a Strategic Waste Facility has been given at Stanway (Ref: ESS/63/06/COL). The working of this quarry extension must not compromise the effective implementation of this waste permission, the site of which is safeguarded in the Waste Local Plan.

3. Additional housing land had been identified in the vicinity of Fiveways Fruit Farm in Colchester Borough Council's adopted Core Strategy and Site Allocation DPD. The quarry extension site would need to be worked ahead of any housing development located in close proximity and not comprise the achievement of the additional housing proposed for the Colchester plan period (end date 2021).

4. A Transport Assessment would be required. The Eight Ash Green interchange (A12/ J26) is currently experiencing peak hour capacity problems so it is important that expansion of the Colchester Quarry site be managed so that the impact to the trunk road network is not worsened and adequate mitigation is provided.

5. Warren Lane Local Wildlife Site lies adjacent to the site and would require protection, for example through buffering.

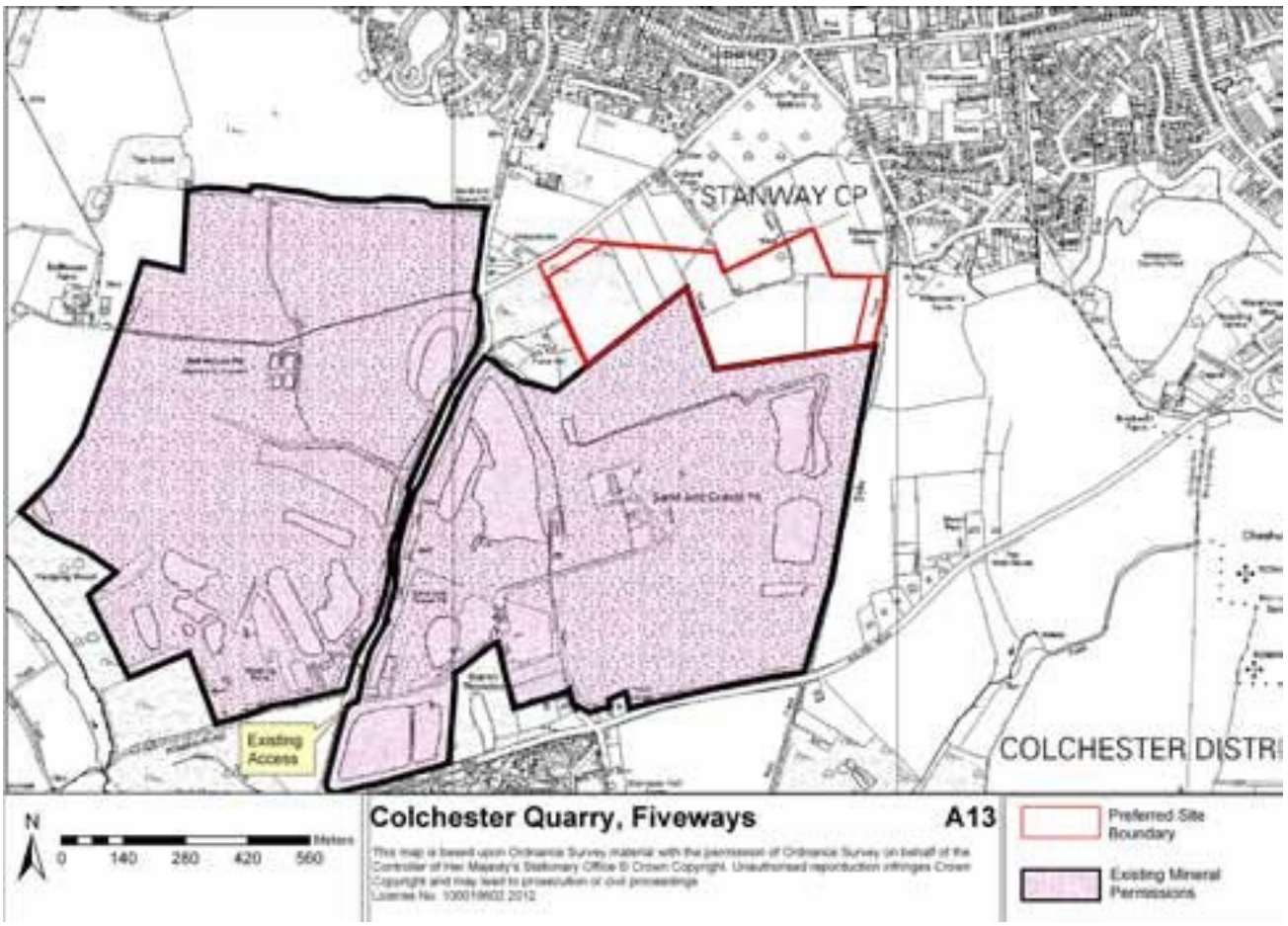
6. The site has potential for protected and notable species. An ecological assessment based on appropriate survey work would be required with any application/ EIA.

7. The site lies in a sensitive area of archaeological deposits. Early consultation with English Heritage would be required to discuss the setting of the earthworks at the Grymes Dyke Scheduled Monument which lies immediately to the east. A historic environment assessment would be required with any application/ EIA.

8. An Agricultural Land Classification and Soil Resources Study should be undertaken, and in the event that the site is comprised of the best and most versatile agricultural land (Grades 1, 2 or 3a), then proposals should be formulated for the sustainable use of the soil resources.

9. The site has been allocated as Open space under Policy SA STA5 of the Colchester Site Allocations October 2010. It is expected that the restoration of this site will be in conformity with this policy.

A13 Colchester Quarry, Fiveways



A20 Sunnymead, Alresford

Site	A20
Address	Sunnymead, Alresford
District	Tendring
Estimated Yield	4.6 mt
Area:	65 ha
Estimated life	16 years
Method of exportation	Road
Method of Restoration	Predominantly low level restoration
After-use	Restoration to a range of managed habitats (Inc.arable)

Specific issues to be addressed

The site would be an extension to the existing Wivenhoe Quarry, linked by a haul route to the existing processing plant and utilising the existing highway access onto the B1027;

1. The existing underpass under Keelars Lane would be utilised.

2. A Transport Assessment would be required with any application/ EIA. There is an expectation that HGV movements would not exceed current levels.

3. Cockaynes Wood Local Wildlife Site adjoins the southern boundary and would require protection during operations, for example through an appropriate buffer of at least 15m.

4. There is evidence of and potential for, protected and notable species on site. An ecological assessment based on appropriate survey work would be required with any application/ EIA;

5. There are 26 residential properties located within 100m of the proposed extraction area, most of them along the north-eastern boundary. A minimum of 100m stand-off should be provided for all residential properties and effective buffering/ screening provided to screen views of the site;

6. The area has the potential for multi-period archaeological deposits within it. A historic environment assessment would be required with any application/ EIA;

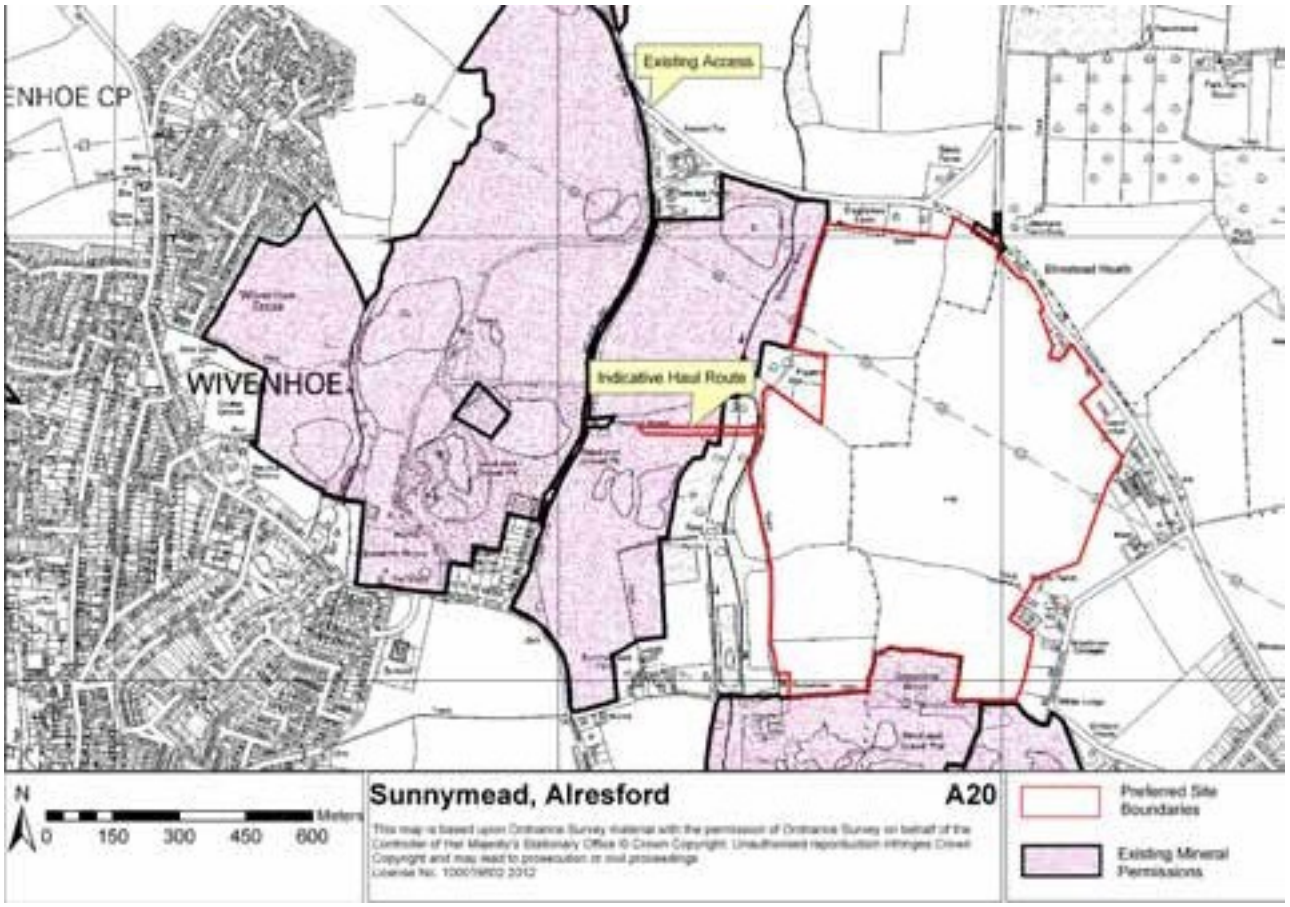
7. PROW footpath Elmstead 24 crosses the site from north to south and though excluded from the extraction area, abuts it on both sides. Sufficient stand-off distance and protection of this route would be required during operations and satisfactory crossing point(s) provided for quarry vehicles. Footpaths Elmstead 19 and Alresford 2 also run along the southern boundary and through Cockaynes Wood and need protection during operations. The ability to reinstate these fully needs to be investigated as part of the suggested restoration scheme;

8. Although the site promoter has promoted infilling using imported inert waste it is considered that this will need to be subject to policies in the Waste Local Plan and for this reason low level restoration is preferred except in relation to point 9 (below).

9. Careful consideration must be given to the final predominantly low-level restoration contours used to ensure the final landform blends with the surrounding topography and to ensure Grade 2 agricultural soils are retained on site.

10. Restoration provides the opportunity for significant biodiversity enhancement and habitat creation on site.

A20 Sunnymead, Alresford



A22 & A23 Little Bullocks Farm, Great & Little Canfield

A22 & A23: Specific issues to be addressed

The following issues are applicable to both of the suggested extraction sites at Little Bullocks Farm:

1. Mineral would be processed utilising mobile plant and exported via the existing site access.

2. A Transport Assessment would be required with any application/EIA.

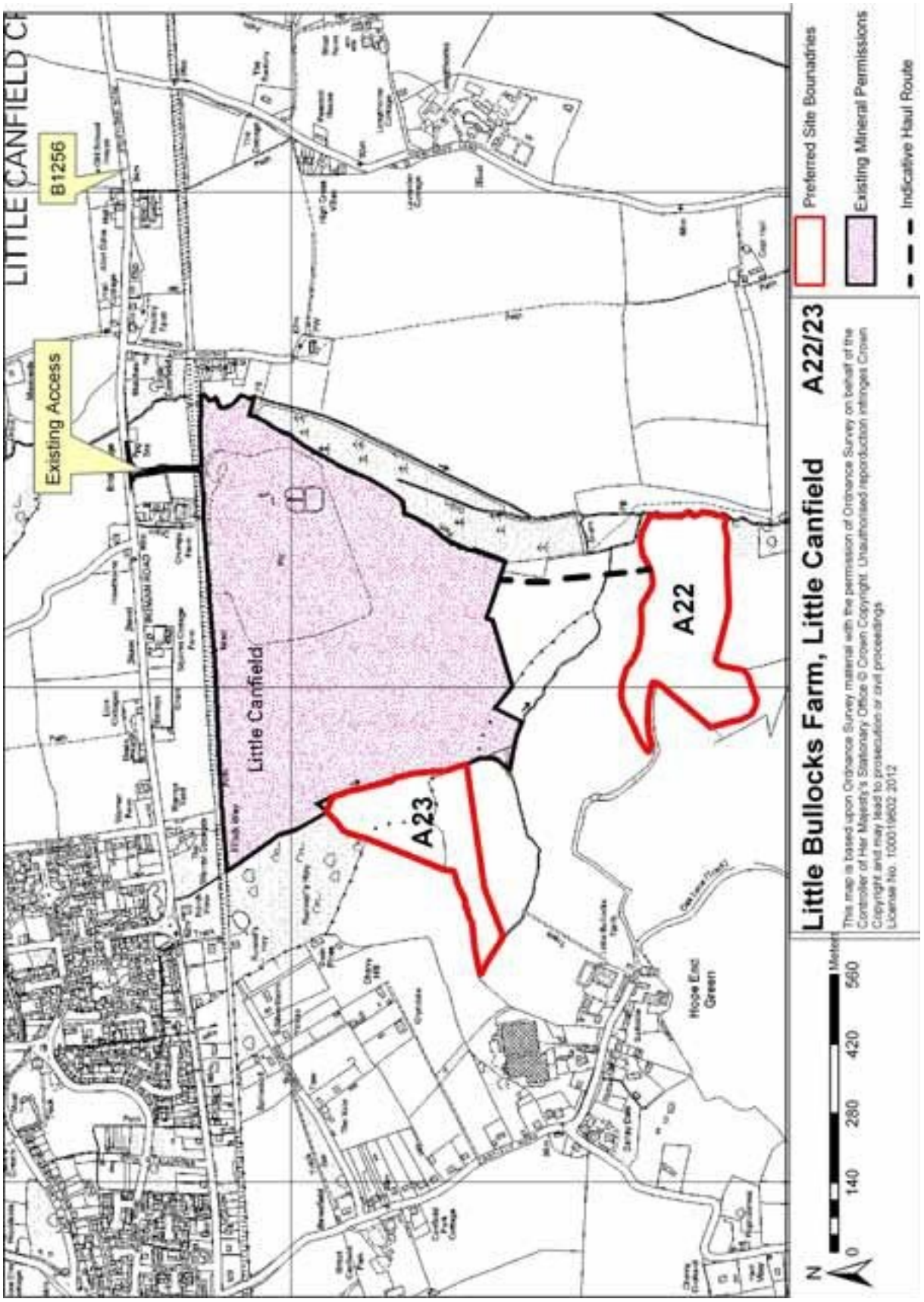
3. Extraction would not commence until after extraction at the existing quarry and all necessary restoration phases have been completed.

4. The sites have the potential for protected and notable species. An ecological assessment based on appropriate survey work would be required with any application/ EIA.

5. The sites are low lying and within the Stansted 13km safeguarding zone. It therefore must be worked and restored without creating areas of standing water or employing putrescible waste for infill purposes as both would attract birds.

6. Careful consideration must be given to the final low-level restoration contours to ensure the final landform blends with the surrounding topography and that restoration would be predominantly back to agricultural use given the presence of Grade 2 agricultural soil.

A22 & A23 Little Bullocks Farm, Great & Little Canfield



A22 Little Bullocks Farm, Little Canfield

Site	A22
Address	Little Bullocks Farm, Great and Little Canfield
District	Uttlesford
Estimated Yield	0.64 mt
Area:	6.9 ha
Estimated life	12 years
Method of exportation	Road
Method of Restoration	Low level restoration
After-use	Agriculture, amenity and nature conservation

Specific issues to be addressed

The site would be a southerly extension of the existing Crumps Farm Quarry, located south of the B1256 and to the east of Hope End Green.

1. The eastern end of the site lies in a small secluded valley with a small river, nearby woodland and a Local Wildlife Site (UFD180 – Canfield End pastures). Steps should be taken to screen views of the extraction area from this direction, including views from the PROW Lt Canfield 19.

2. The river and Local Wildlife Site require protection for example through an appropriate buffer of at least 15m and through the assessment of potential hydrological impacts. Existing vegetation to the south of the site should be protected and retained.

3. The site lies in a potentially sensitive area for archaeology. A historic environment assessment would be required with any application/ EIA.

4. The site layout should ensure a sequential approach is adopted whereby areas of greater vulnerability, such as buildings and stockpiles are located in Flood Zone 1. Given that the majority of the site is located in Flood Zone 1, this should be achievable. The flood risk associated with the watercourses should be assessed as part of a site specific Flood Risk Assessment and suitable mitigation measures adopted.

5. The site is crossed by National Grid Underground pipeline, and as such early liaison would be required with the National Grid.

A23 Little Bullocks Farm, Little Canfield

Site	A23
Address	Little Bullocks Farm, Great and Little Canfield
District	Uttlesford
Estimated Yield	0.06 mt
Area:	5.5 ha
Estimated life	2 years
Method of exportation	Road
Method of Restoration	Low level restoration
After-use	Agriculture, amenity and nature conservation

Specific issues to be addressed

A small westerly extension site for the existing Crumps Farm Quarry, located south of the B1256 and to the north-east of Hope End Green.

1. A previous application for the creation of a fishing lake in this area (which would have involved the extraction of sand and gravel), was refused in 2004 on the grounds of need, proximity to Stansted airport, archaeology, proximity to a former landfill site, harm to an adjoining designated site and harm to landscape.

2. The site is adjacent to a Local Wildlife Site (UFD 172 – Runnels Hey), and area of Ancient Woodland. This site must be protected for example, through an appropriate buffer of at least 15m. A hydrological assessment should accompany any application/ EIA.

3. The site lies in a potentially sensitive area overlooking a tributary of the River Roding with the possibility of archaeological deposits surviving. A historic environment assessment would be required with any application/ EIA.

4. Residential property off Canfield Drive with views of the site should be protected by appropriate bunding/ screening.

5. PRoW footpaths Great Canfield 2 and Little Canfield 8 cross the site and would require temporary diversion during operations.

A31 Maldon Road, Birch

Site	A31
Address	Maldon Road, Birch
District	Colchester
Estimated Yield	4 mt
Area:	25 ha
Estimated life	13 years
Method of exportation	By conveyor to Birch Quarry and onward by road
Method of Restoration	Low level restoration
After-use	Restoration to a range of managed habitats (Inc. arable)

Specific issues to be addressed

This is an extension for Birch Quarry, located on the southern side of Maldon Road, west of Birch. Mineral would be moved by conveyor under Maldon Road for processing and exported via the existing site access.

1. A Transport Assessment would be required with any application/ EIA.

2. Extraction would not commence until after extraction at the existing quarry and all necessary restoration phases have been completed.

3. The eastern tree line is to be protected and retained with no extraction to the south.

4. There is evidence of protected and notable species on site. An ecological assessment based on appropriate survey work would be required with any application/ EIA.

5. Whilst predominantly within Flood Zone 1, an area of Flood Zone 3 runs along the ditch line to the north east. Any buildings/ stockpiles should be located within Flood Zone 1. A site specific Flood Risk Assessment will be required to address the management of surface water and drainage from the site, to reduce the overall level of flood risk to the area and beyond and ensure suitable mitigation measures are adopted.

6. An assessment and an appraisal of potential conflict with Cordon Sanitare Waste water Treatment Works would be assessed as part of any application/ EIA.

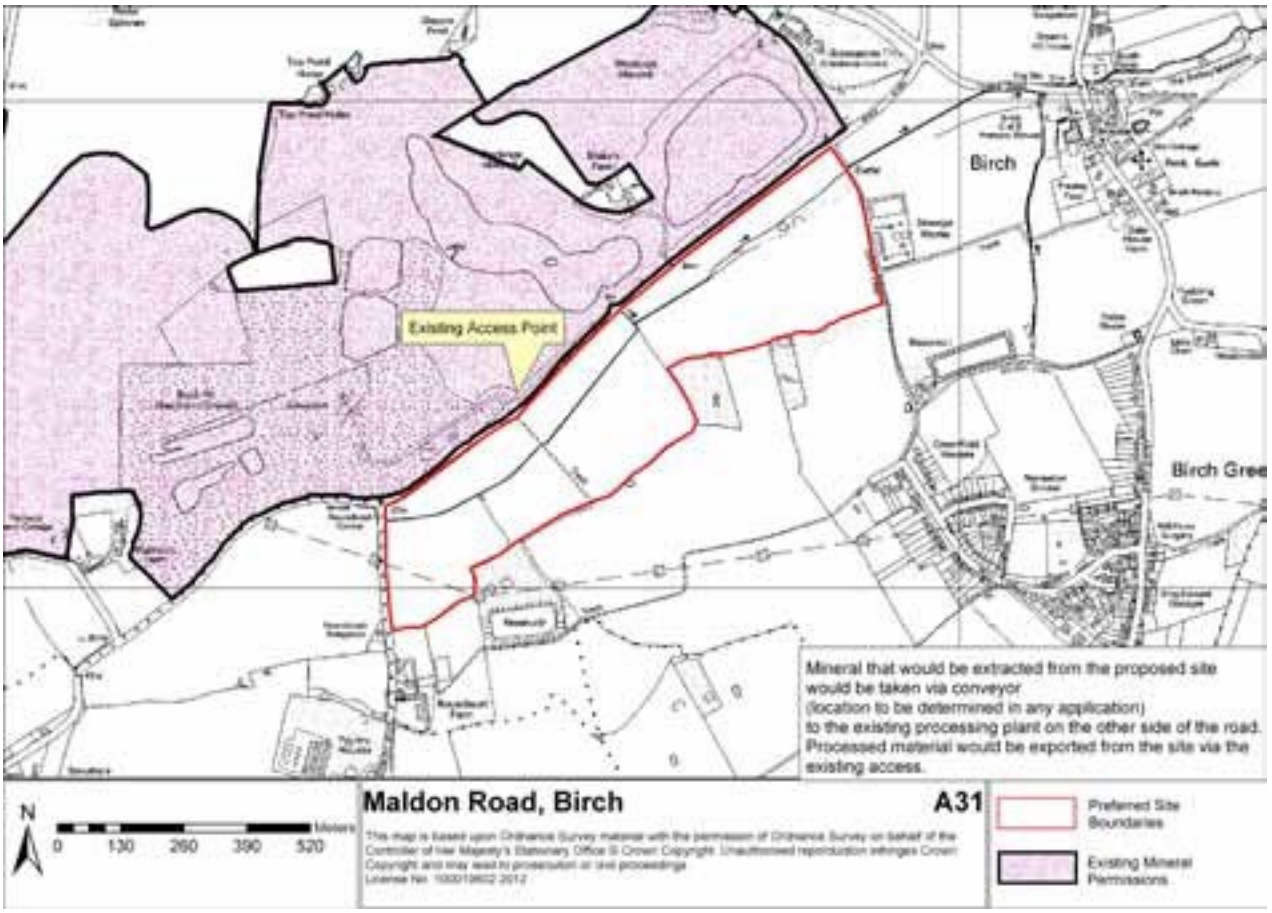
7. The site is visible from the Maldon Road on the long northern boundary. Bunding/ screening would be required to screen this view and the view from the footpath to the south (Birch 13). The opportunity exists for early advance planting.

8. A minimum 100m stand off distance and appropriate bunding/ screening to be provided for Roundbush Bungalow on the south-west corner of the site.

9. Roundbush Farm to the south-west includes a group of Listed Buildings which must be protected. The site lies in what is expected to be a sensitive archaeological area. A historic environment assessment must be agreed as part of any application/ EIA. This should include details of appropriate restoration to protect the setting of the Listed Buildings.

10. Restoration provides the opportunity for significant biodiversity enhancement and habitat creation on site.

A31 Maldon Road, Birch



A38 & A39 Blackley Quarry

A38 & A39 Specific issues to be addressed

These sites would be extensions to the existing site at Blackley Quarry and would make use of the existing haul road access to the junction on the A131.

1. A Transport Assessment would be required with any application/ EIA.

2. Extraction would not commence until after extraction at the existing quarry and all necessary restoration phases have been completed.

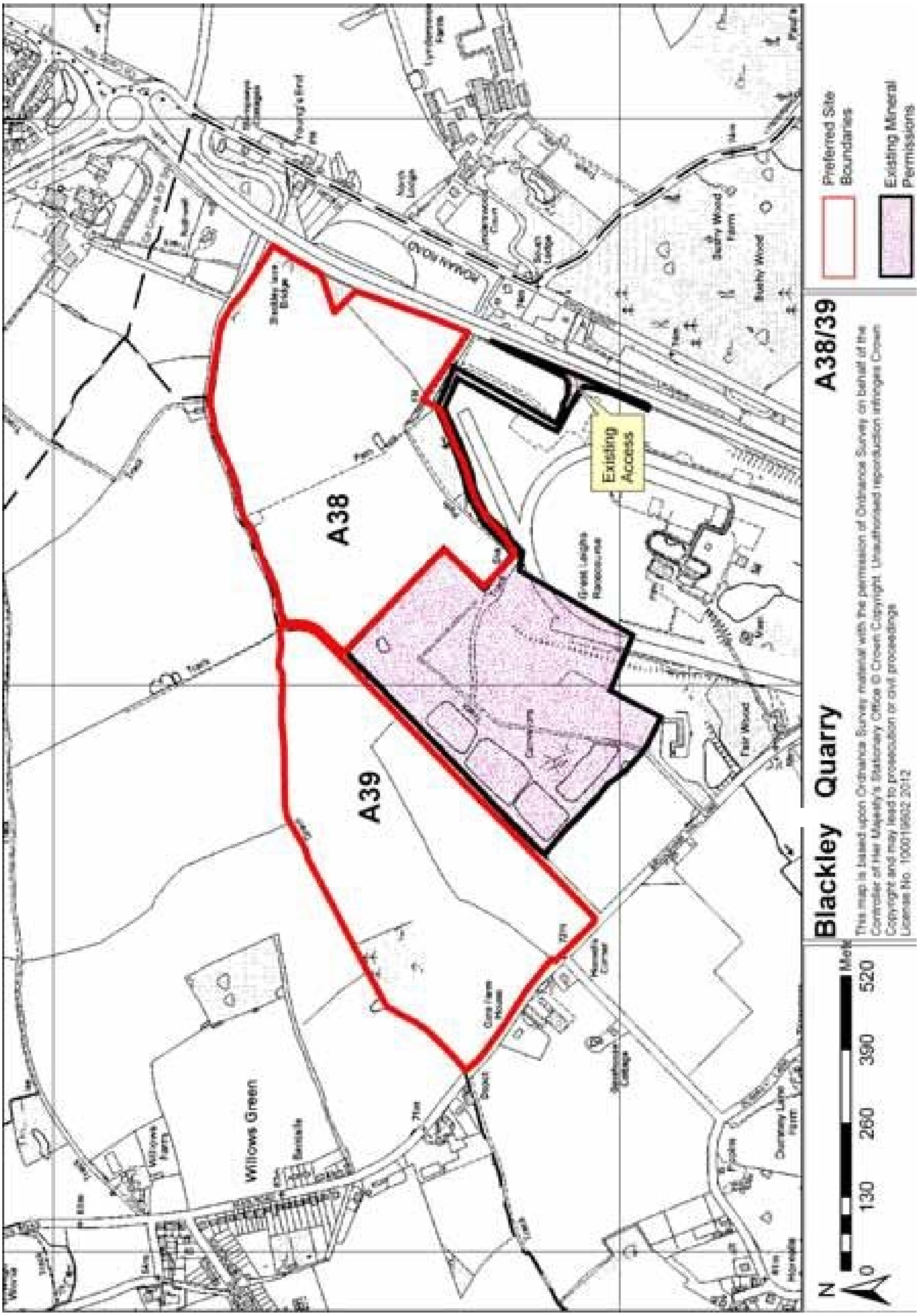
3. The sites adjoins Great Leighs Racecourse, the future of which is uncertain. Liaison with Chelmsford City Council is recommended.

4. The sites have records of protected and notable species. An ecological assessment based on appropriate survey work would be required with any application/ EIA.

5. Careful consideration must be given to the final low-level restoration contours to ensure the final landform blends with the surrounding topography and that restoration would be predominantly back to agricultural use given the sites contain best Grade 2 agricultural soils.

6. Although the site promoter has promoted infilling using imported inert waste it is considered that this will need to be subject to policies in the Waste Plan, and for this reason low level restoration is preferred (see also point 5 above).

A38 & A39 Blackley Quarry



A38 Blackley Quarry, Great Leighs

Site	A38
Address	Blackley Quarry, Gt Leighs
District	Chelmsford
Estimated Yield	1.07 mt
Area:	22 ha
Estimated life	12 years
Method of exportation	Road
Method of Restoration	Assessed for low level restoration
After-use	Agriculture

Specific issues to be addressed

This would be an extension to the existing site at Blackley Quarry and would make use of the existing haul road access to the junction on the A131.

1. The site would have a visual impact upon Blackley Cottages, Blackley Lane, the A131 and footpaths to the south. Appropriate mitigation must be provided through bunding/ advanced planting/ screening.

2. Site has the possibility for below ground remains relating to the nearby Roman Road. A detailed historic environment assessment which includes details of appropriate restoration to protect the setting of the Listed Buildings must be agreed as part of any application/ EIA.

3. PRoW footpaths Great Leighs 2, 3 & 4 cross the site and would need to be temporarily diverted during operations.

A39 Blackley Quarry, Great Leighs

Site	A39
Address	Blackley Quarry, Gt Leighs
District	Chelmsford
Estimated Yield	0.75 mt
Area:	21.2 ha
Estimated life	10 years
Method of exportation	Road
Method of Restoration	Assessed for predominantly low level restoration
After-use	Agriculture

Specific issues to be addressed

The site would be an extension of the existing site at Blackley Quarry and it is expected that extraction would begin after completion of the A38. A new crossing would be required across Blackley Lane along with the retention of the existing haul road access to the junction on the A131.

1. The site has a high landscape sensitivity which would be affected by the removal of hedgerows containing oaks within the site.

2. The copse to the north of the site should be protected for example, through buffering.

3. The site is likely to have a visual impact for a number of properties to the south-west on Moulsham Hall Lane, users of Blackley Lane and the footpath by the north-west boundary. This would require mitigation through appropriate bunding/ advanced planting/ screening.

4. The site lies in close proximity to a Listed Building and therefore a historic environment assessment which includes details of appropriate restoration to protect the setting of the Listed Buildings must be agreed as part of any application/ EIA.

A40 Land at Shellow Cross Farm

Site	A40
Address	Land at Shellow Cross Farm
District	Chelmsford and Epping
Estimated Yield	3.5 mt
Area:	105 ha
Estimated life	14 years
Method of exportation	Road
Method of Restoration	Low level restoration
After-use	Agriculture and nature conservation

Specific issues to be addressed

This would be a new site located to the west of Roxwell comprising two parcels of land linked by a cross-country haul route.

1. The processing plant would be located within the northern parcel of land and a new access created onto the A1060.

2. No access would be permitted from Elm Road to the south.

3. A Transport Assessment would be required with any application/ EIA. The highway boundary and land ownership needs to be further investigated and a speed check undertaken. A right-turn lane and road realignment would be required.

4. The landscape has a medium to high sensitivity to change and the southern area would have the greatest impact due to its size. Appropriate phasing of site working and restoration would be required to minimise this impact.

5. An appropriate buffer of at least 15m would need to be provided around Rowe's Wood Local Wildlife Site and Bushey-hays/ Ashwood Spring Local Wildlife Site . Operations should avoid simultaneous open void space on either side of the designated woodlands.

6. There is evidence of and potential for protected and notable species on site. An ecological assessment based on appropriate survey work would be required with any application/EIA.

7. The site is likely to have a visual impact on several properties on Elms Road to the south, properties with views of the northern area and footpaths that cross the site. Appropriate bunding/ screening would be required to reduce this impact. A minimum 100m stand-off should be maintained to all residential property.

8. The quarry lies within a potentially sensitive historic area. Early consultation with English Heritage would be needed as the proposal could affect a number of Listed

Buildings and scheduled sites (including moated sites). A historic environment assessment which includes details of appropriate restoration to protect the setting of the Listed Buildings must be agreed as part of any application/ EIA.

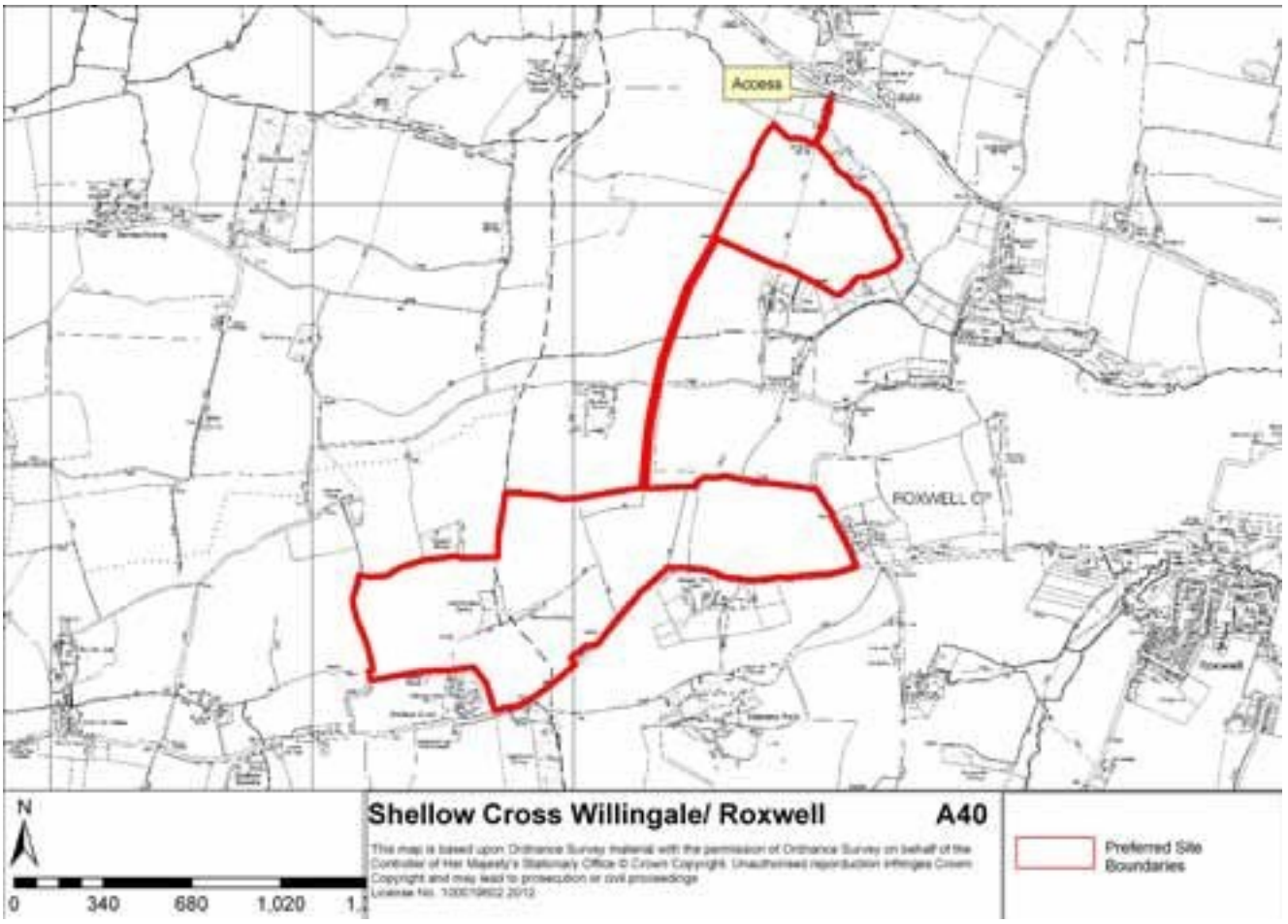
9. The risk of flooding associated with the small ditches and watercourses around the edge of the site would need to be assessed as part of site specific Flood Risk Assessment and suitable mitigation measures adopted. A hydrological survey and assessment would need to inform any application/ EIA.

10. PRoW footpaths Roxwell 2, 14 & 17 and a Bridleway Roxwell 68 cross the site and would need to be temporarily diverted during operations.

11. Careful consideration must be given to the final low-level restoration contours to ensure the final landform blends with the surrounding topography and that restoration would be predominantly back to agricultural use given the site contains Grade 2 agricultural soils.

12. Revision of site area around Mountneys is required, pushing the boundary further to the north with additional/ significant planting also required along the eastern boundary.

A40 Land at Shellow Cross Farm



A46 Land at Colemans Farm

Site	A46
Address	Land at Colemans Farm
District	Braintree
Estimated Yield	2.5 mt
Area:	46 ha
Estimated life	14 years
Method of exportation	Road
Method of Restoration	Water
After-use	Recreation and nature conservation

Specific issues to be addressed

This is a new site that is east of Witham and south of the A12.

1. The Blackwater valley provides an important wildlife corridor. Habitat Regulation Assessment identifies that Appropriate Assessment would be required.

2. Early consultation with English Heritage would be necessary. As part of any EIA a detailed historic environment assessment will be required which will include intrusive evaluation by test pitting and trial trenching across the site.

3. The site promoter must liaise with the Environment Agency prior to any application/ EIA being submitted in order to discuss possible arrangements for water abstraction.

4. Flood Risk Assessment should be carried out and accompany any future application/ EIA.

5. Prior consent from the EA would be required if any ditches or minor watercourses are to be diverted or modified.

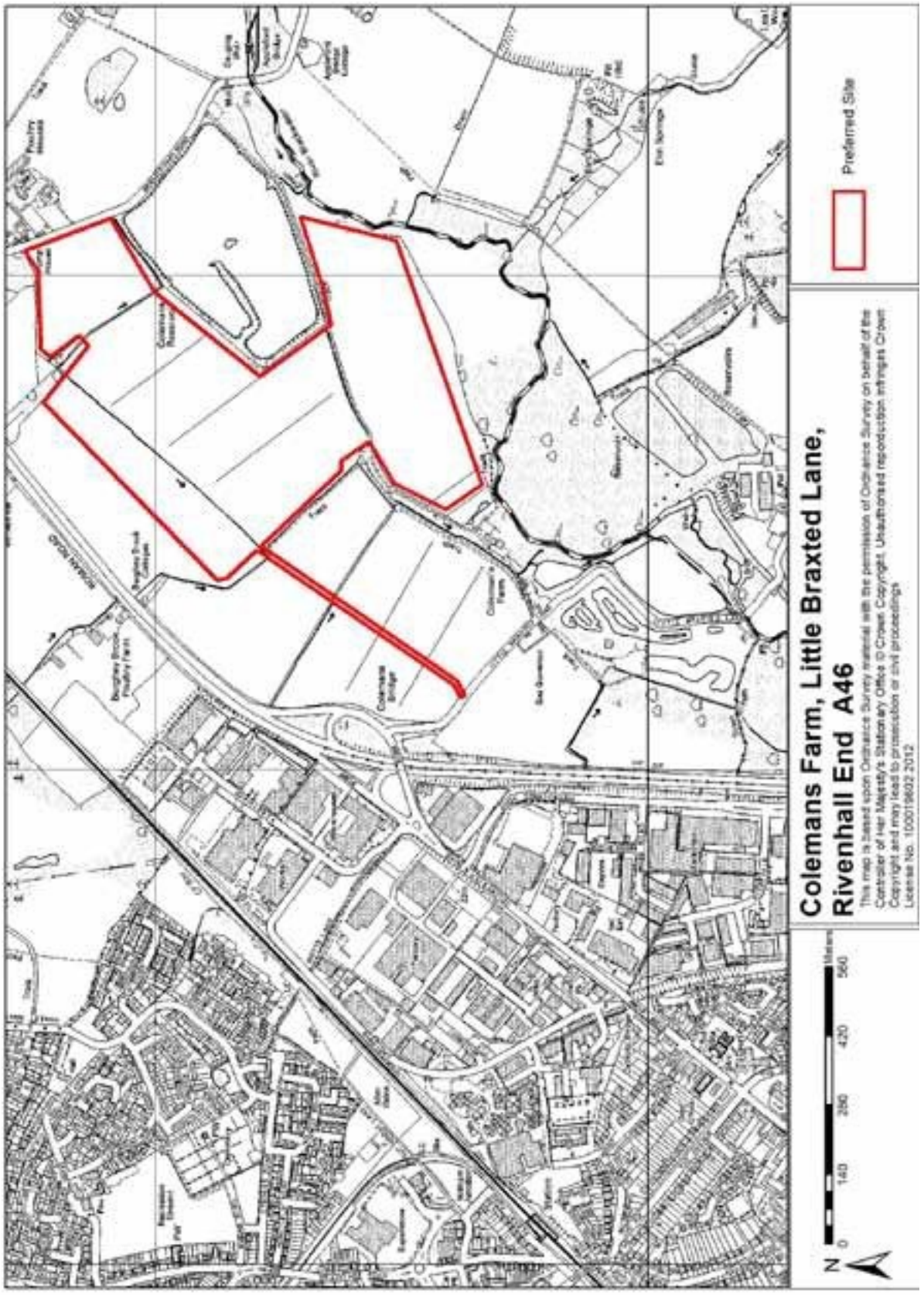
6. A full hydrological and hydro-geological assessment will be required with any application/EIA.

7. A Transport Assessment would be required to be submitted with any application/ EIA.

8. PROW Bridleway Rivenhall 29 crosses the site and would need to be temporarily diverted during operations.

9. Restoration also provides the opportunity for significant biodiversity enhancement and habitat creation on site.

A46 Land at Colemans Farm



B1 Slough Farm

Site	B1
Address	Slough Farm
District	Colchester
Estimated Yield	0.46mt of silica sand 0.39mt of sand and gravel
Area:	11.66 ha
Estimated life	10 years
Method of exportation	Road
Method of Restoration	Assessed for low level restoration*
After-use	Agriculture

Specific issues to be addressed

This site would be an extension to the existing Martells Quarry and would make use of the existing access onto Slough Lane.

1. Extraction would not be able to commence until extraction and the necessary restoration has been completed on the latest extension area ref ESS/18/07/TEN.

2. Access to the road network to be by way of continued use of the private track access to the A120, via the lorry park.

3. Performance of the A120 junction is to be monitored and any need to improve it to accommodate traffic from the proposed development to be identified as early as possible in the planning process.

4. Ability to access processing plant without increasing mineral traffic movements on Slough Lane needs to be demonstrated.

5. Trees which provide screening on the north, south and west boundaries to be protected from the effects of extraction.

6. There is evidence of, and potential for, protected and notable species on site. An ecological assessment based on appropriate survey work would be required with any application/EIA.

7. The site is nearby to a River and agricultural groundwater abstraction points. A hydrological survey and assessment would need to inform any application/ EIA.

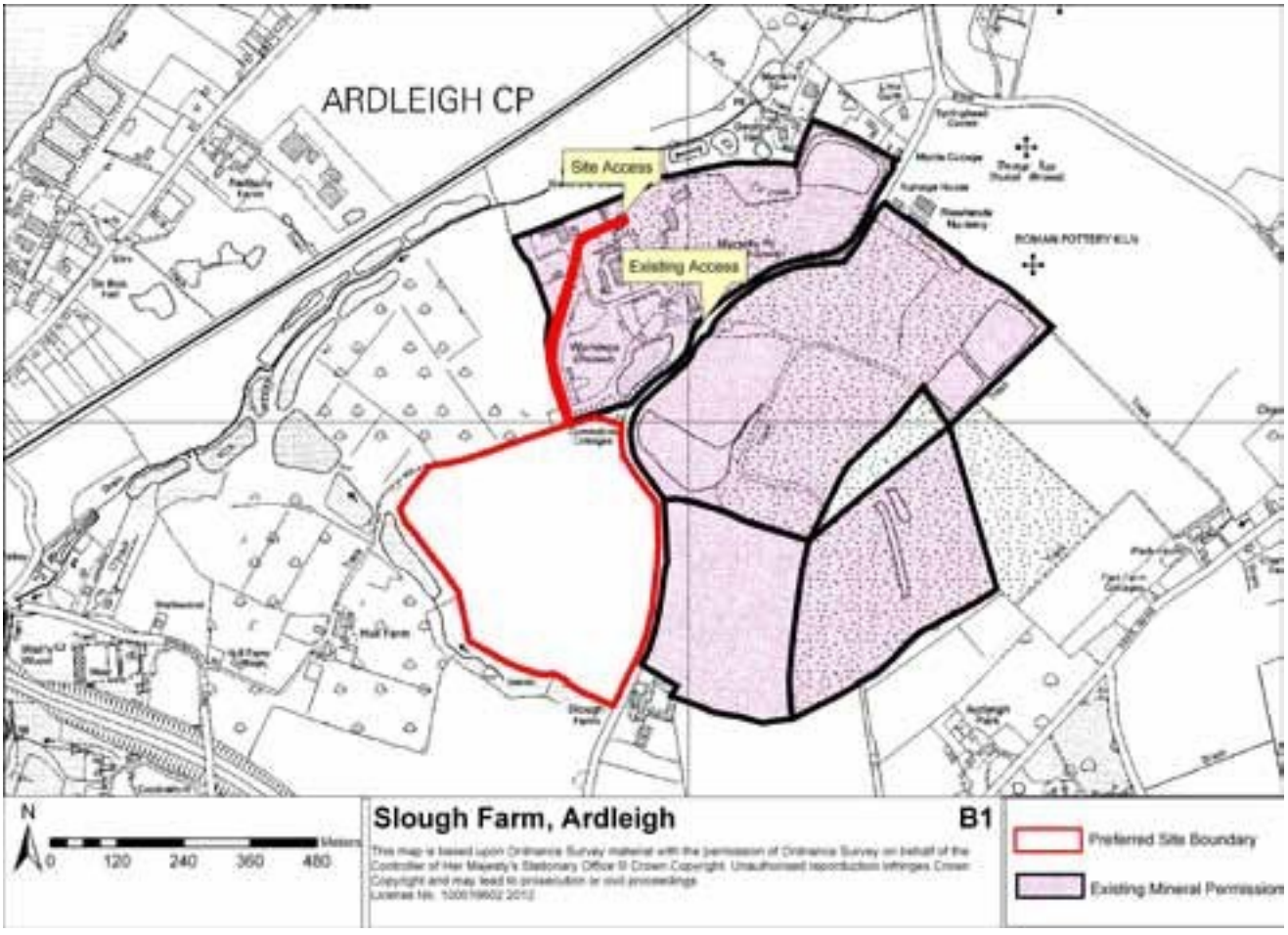
8. Excavation is to commence at the northern end of the site in order to reduce impact on properties. There should also be an appropriate buffer and bunding/ screening for these properties.

9. Early consultation with English Heritage would be required to discuss the setting of the Scheduled Monument. There is evidence of archaeological deposits, which suggest multi period occupation. A historic environment assessment would be required with any application/ EIA.

10. *Although the site promoter has promoted infilling using imported waste it is considered that this will need to be subject to policies in the Waste Plan and for this reason low level restoration is preferred.

11. Careful consideration must be given to the final low-level restoration contours to ensure the final landform blends with the surrounding topography and that restoration would be predominantly back to agricultural use given the site contains Grade 2 agricultural soils.

B1 Slough Farm



Appendix Two. Profiles for Existing and Proposed Transhipment Sites

This Appendix contains a complete set of individual Profiles for each of the transhipment sites subject to Policy S9. The site denoted with a 'D' is not yet safeguarded but has been developed. Those sites denoted with an 'F' were given safeguarded status in the Minerals Local Plan 1996. Each Site Profile covers the site location, site boundaries and site characteristics; and notes any detailed development requirements associated with operations at each site.

- D2 Ballast Quay, Fingringhoe
- F1 Chelmsford Rail Depot
- F2 Harlow Mill Rail Station
- F3 Marks Tey Rail Depot
- F4 Port of Harwich

D2 Ballast Quay, Fingringhoe

Site	D2
Address	Ballast Quay, Fingringhoe
District	Colchester
Area:	11.66 ha

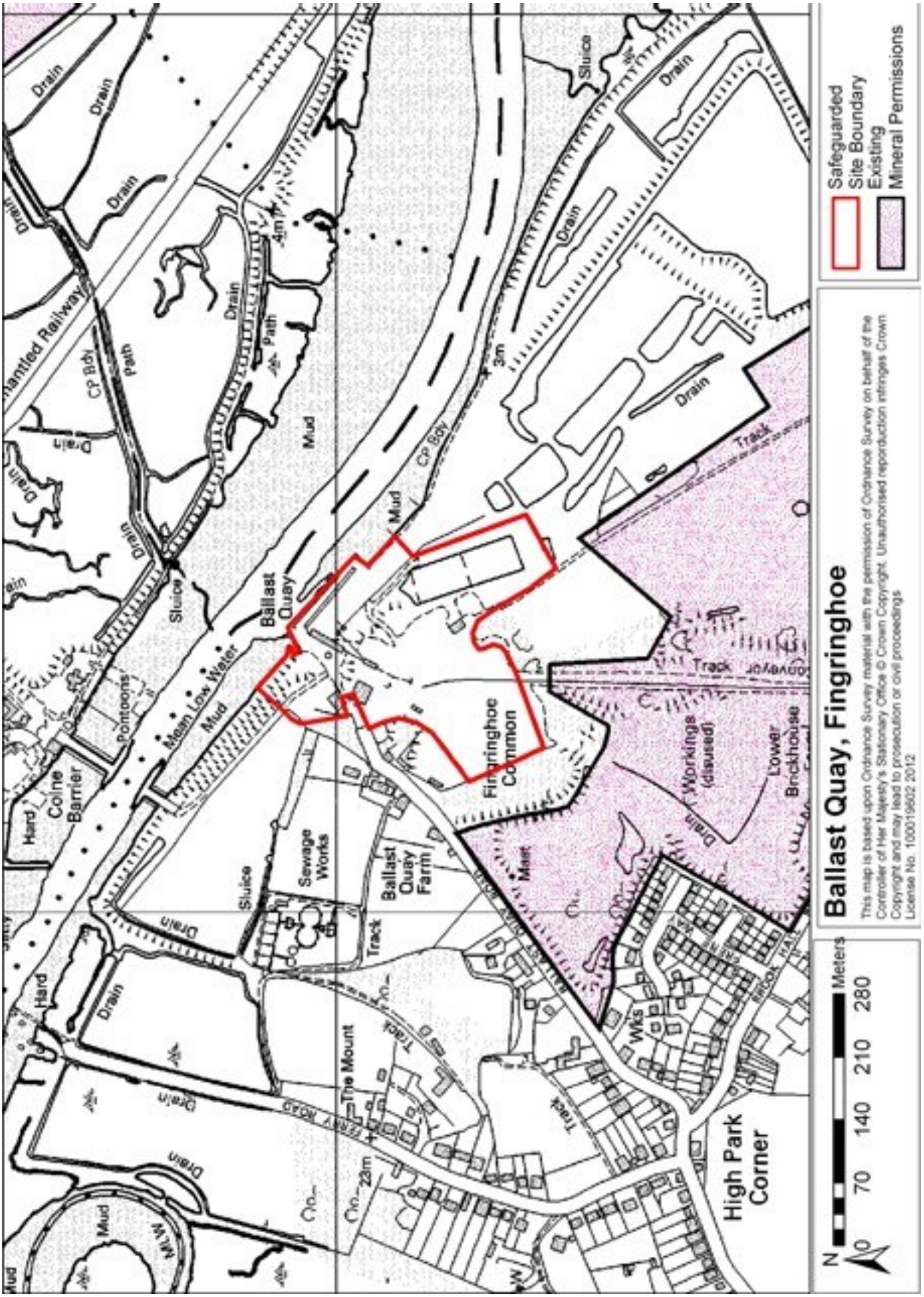
Notes:

1. Safeguarded status would be withdrawn once the current permitted mineral extraction at Fingringhoe Quarry is completed.

2. Only excavated mineral from Fingringhoe Quarry shall be exported by barge.

3. This site is not suitable for the importation and onward distribution of mineral by road due to the lack of suitable infrastructure.

D2 Ballast Quay, Fingringhoe



F1 Harlow Mill Station

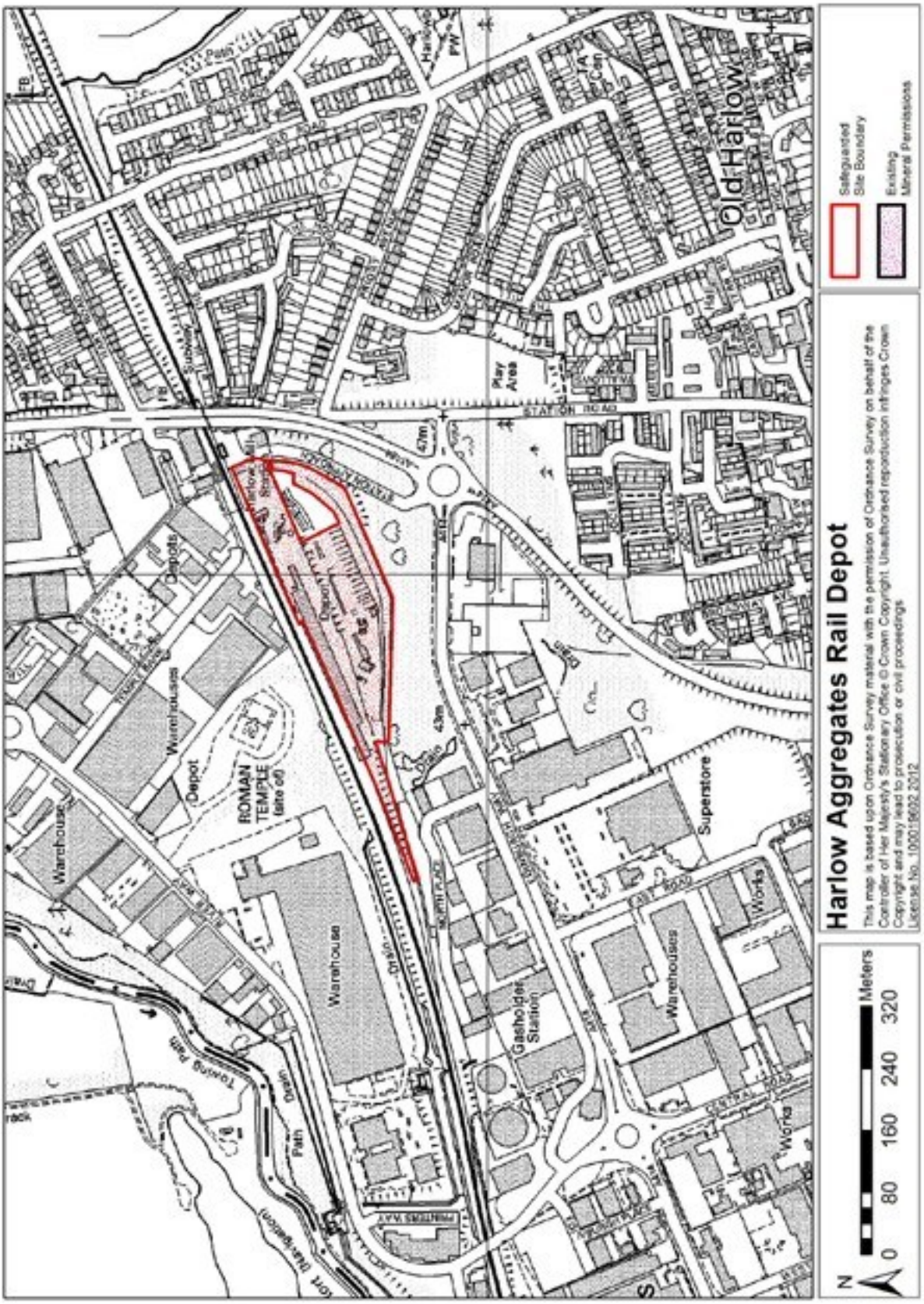
Site	F1
Address	Harlow Mill Station
District	Harlow
Area:	3.7 ha

Notes:

1. Harlow Mill site is located is located within the River Way Industrial Estate, approximately 2.5km from Harlow town centre on the northern edge of the town. It . The site is situated west of Cambridge Road (A1184) and north of Edinburgh Way (A414). Access is via Station Approach Road.

2. The area contains a coated roadstone plant and cement batching facility and it borders an aggregate unloading facility (run by Lafarge Tarmac). It is also bordered by a separately operated roadstone coating plant to the south (Aggregate Industries). Both sites are of the same use which is for the purpose of handling and processing aggregates for the manufacture and distribution of coated roadstone.

F1 Harlow Mill Station



F2 Chelmsford Rail Sidings

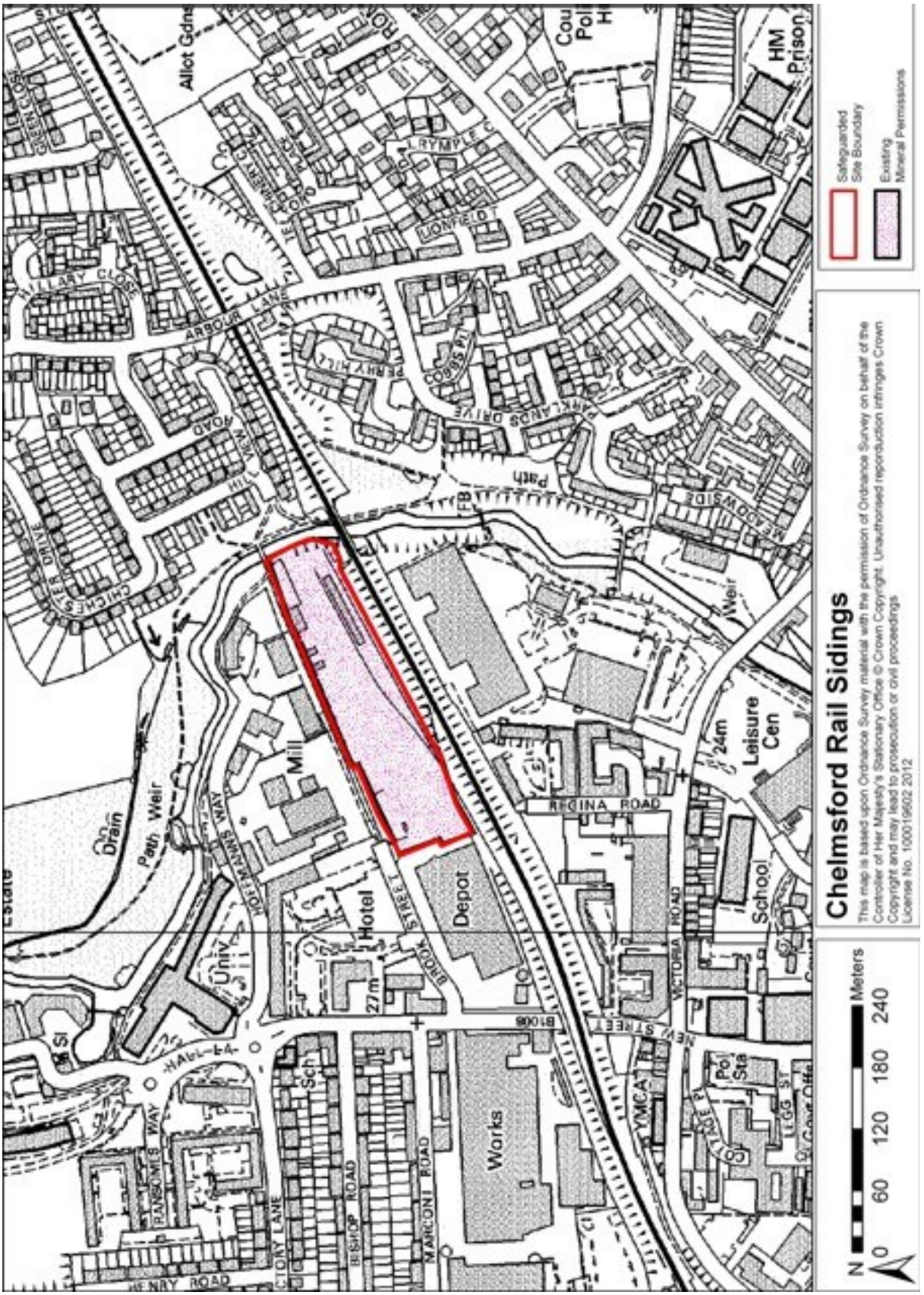
Site	F2
Address	Chelmsford Rail Sidings
District	Chelmsford
Area:	1.2 ha

Notes:

1. The site is currently used to import and store aggregate delivered by both road and rail. The site is accessed via Brook Street which itself is accessed off New Street to the West of Chelmsford Town Centre, with good access to major strategic routes including the A12.

2. The site adjoins allocated employment land within Chelmsford City Council's adopted 'Chelmsford Town Centre Area Action Plan' which forms part of the Council's adopted Local Development Framework. The northern half of the site is identified as the Railway Sidings, Brook Street 'Opportunity Site'. Any proposal for development within this area will need to be in conformity with both Local Plans.

F2 Chelmsford Rail Sidings



F3 Marks Tey Rail Siding

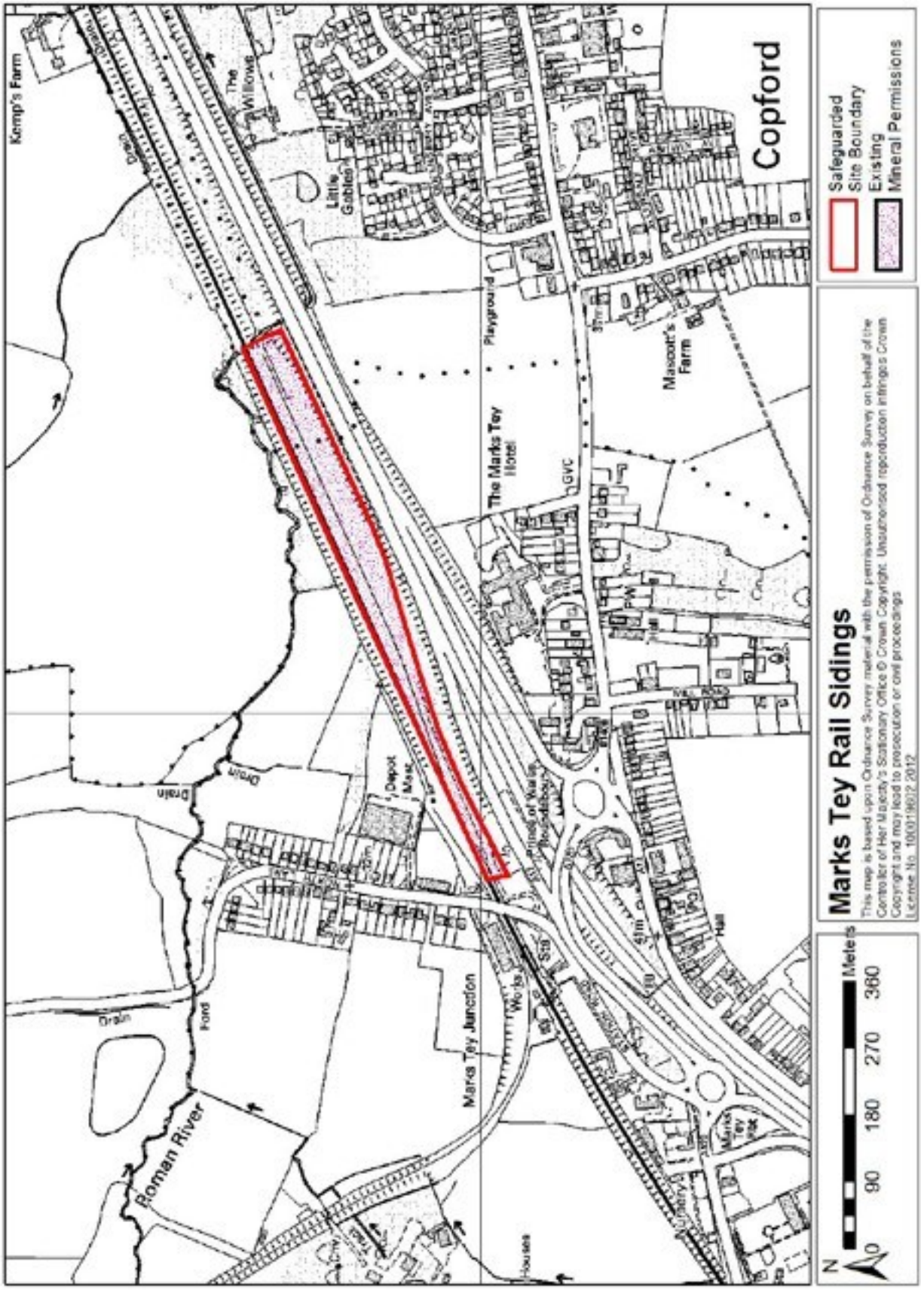
Site	F3
Address	Marks Tey Rail Siding
District	Colchester
Area:	3.4 ha

Notes:

1. The land including the sidings is used for the loading of sand and aggregates from their Stanway workings onto railway wagons for transport to London. The site comprises of little more than an access road and sidings with some limited aggregate storage area. Access is from Station Road which connects to the A120, and the site is reasonably well screened.

2. The facility remains in active use and it is proposed that the area should continue to be safeguarded to ensure it remains available for mineral transhipment.

F3 Marks Tey Rail Siding



F4 Port of Harwich

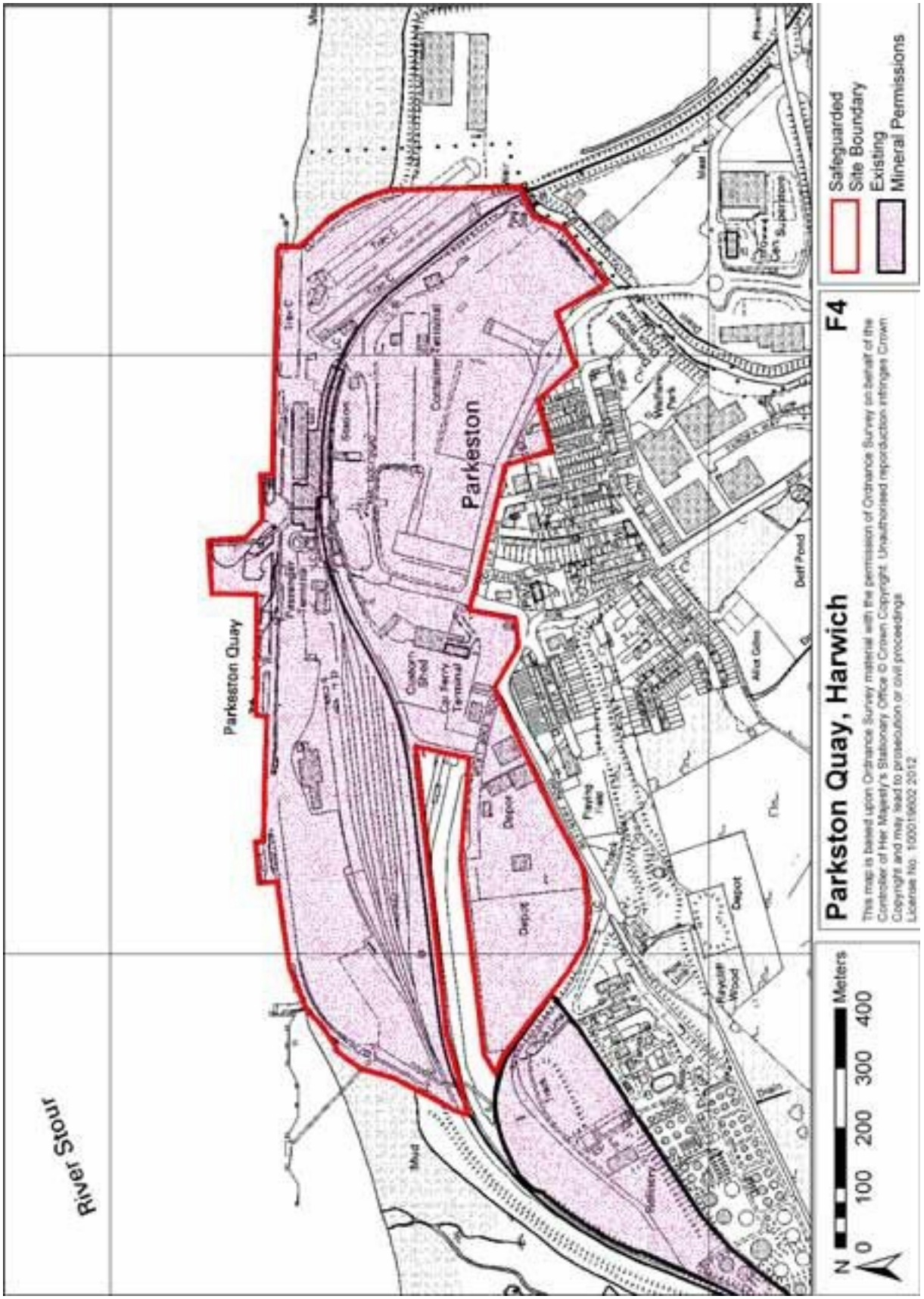
Site	F4
Address	Port of Harwich
District	Tendring
Area:	6.2 ha

Notes:

1. All deliveries are delivered to this site via rail and sourced from Somerset (Limestone Type 1) and Acton, West London (spent rail ballast). The site is operated by virtue of it being rail-operational land used specifically for the purpose of the bulk handling of rail delivered aggregates.

2. The site, adjacent to Harwich International Port, is accessed via West Dock Road with good access to major routes, primarily the A120. The site is allocated as an existing employment area within Tendring District Council's Local Plan adopted 2007.

F4 Port of Harwich



Appendix Three. Profiles for Strategic Aggregate Recycling Sites (SARS)

This Appendix contains a list of each of the strategic aggregate recycling sites subject to Policy S5:

- Purdeys Industrial Estate, Rochford
- Bulls Lodge, Chelmsford
- Stanway, Colchester

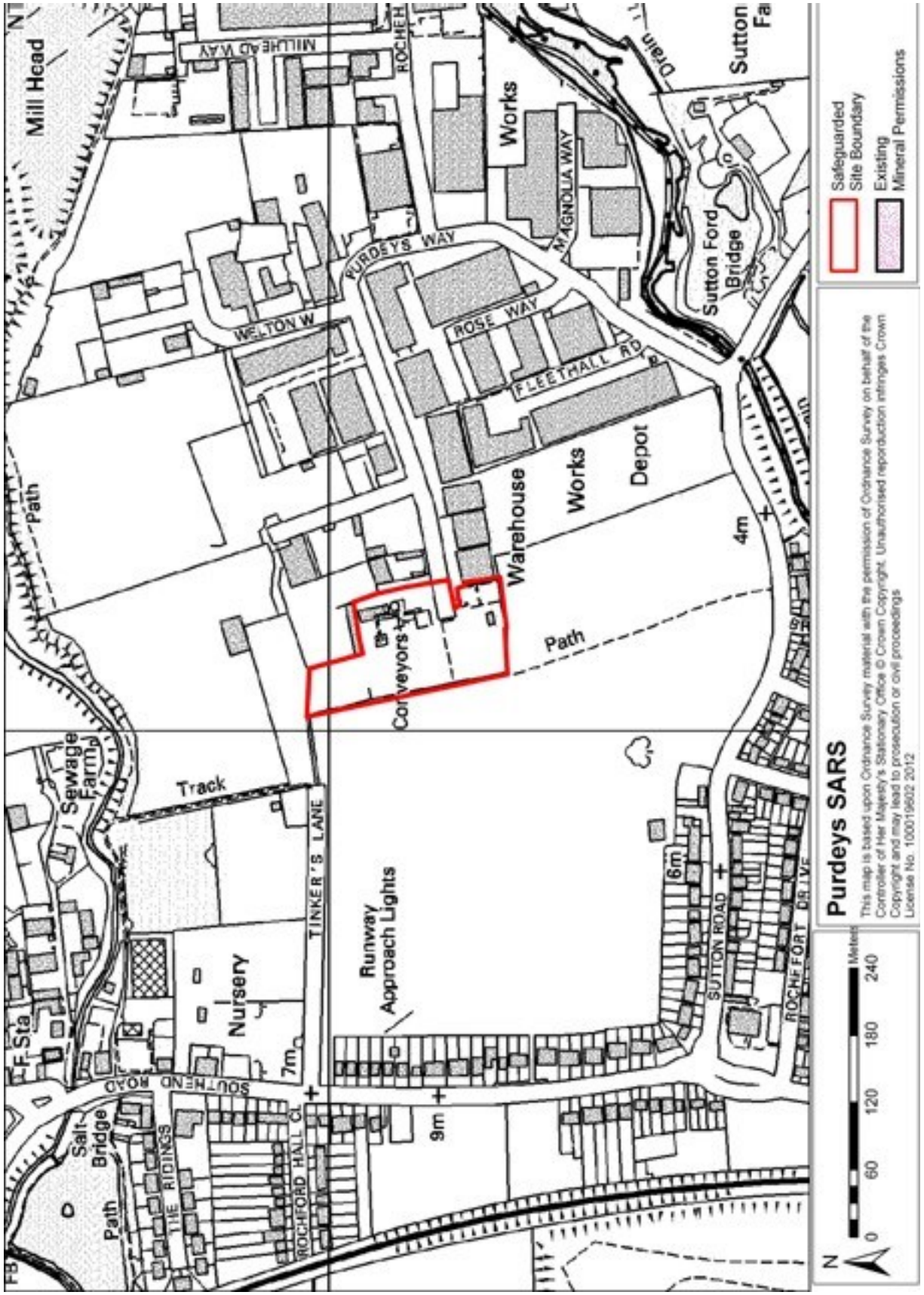
Purdeys Industrial Estate SARS

Site	Purdeys Industrial Estate SARS
Address	Purdeys Industrial Estate
District	Rochford
Area:	1.4 ha

Notes:

1. This site, located within Purdeys Industrial Estate, is safeguarded for the life of the Plan, subject to planning permission (ref: ESS/25/07/ROC) which is permanent.

Purdeys Industrial Estate SARS



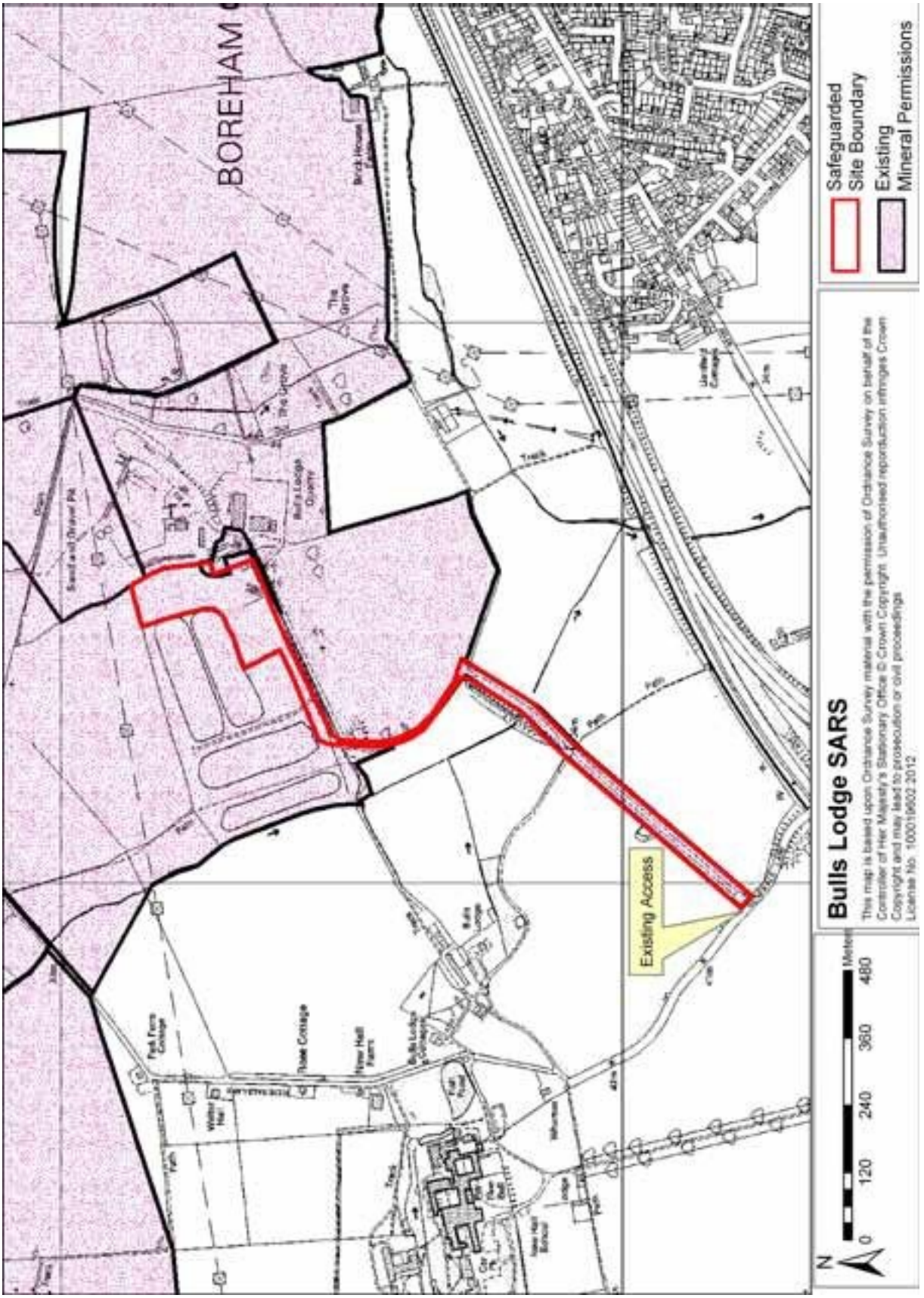
Bulls Lodge SARS

Site	Bulls Lodge SARS
Address	Bulls Lodge Quarry
District	Chelmsford
Area:	1.2 ha

Notes:

The Aggregate Recycling Plant at Bulls Lodge Quarry is subject to temporary planning permission (ESS/25/08/CHL) with an expiry date of 30 June 2030, which is beyond the plan period.

Bulls Lodge SARS



Stanway SARS

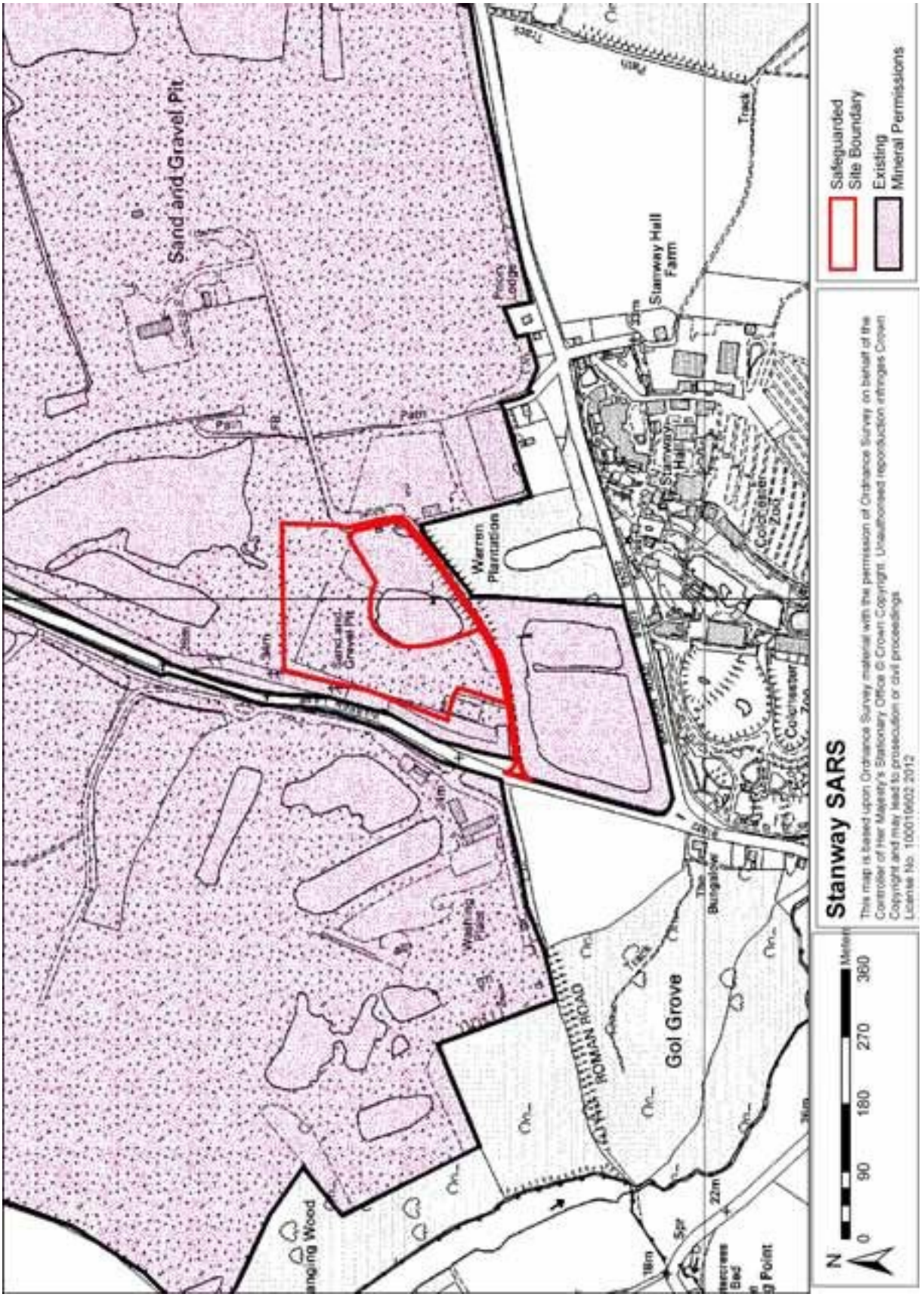
Site	Stanway SARS
Address	Warren Lane, Stanway
District	Colchester
Area:	4 ha

Notes:

1. Stanway is safeguarded subject to planning permission (ref: ESS/17/05/COL).

2. Safeguarding status will be withdrawn on expiry of the permission on 11 January 2015 (as stipulated within condition 1) unless a new application is granted for continuation of the temporary activity.

Stanway SARS



Appendix Four. Profiles of Safeguarded Coated Stone Plants (Asphalt)

This Appendix contains the list of each of the safeguarded coated stone plants subject to Policy S9:

- Sutton Wharf, Rochford
- Stanway, Colchester
- Wivenhoe Quarry, Colchester
- Bulls Lodge, Chelmsford
- Essex Regiment Way, Chelmsford
- Harlow Mill Station, Harlow

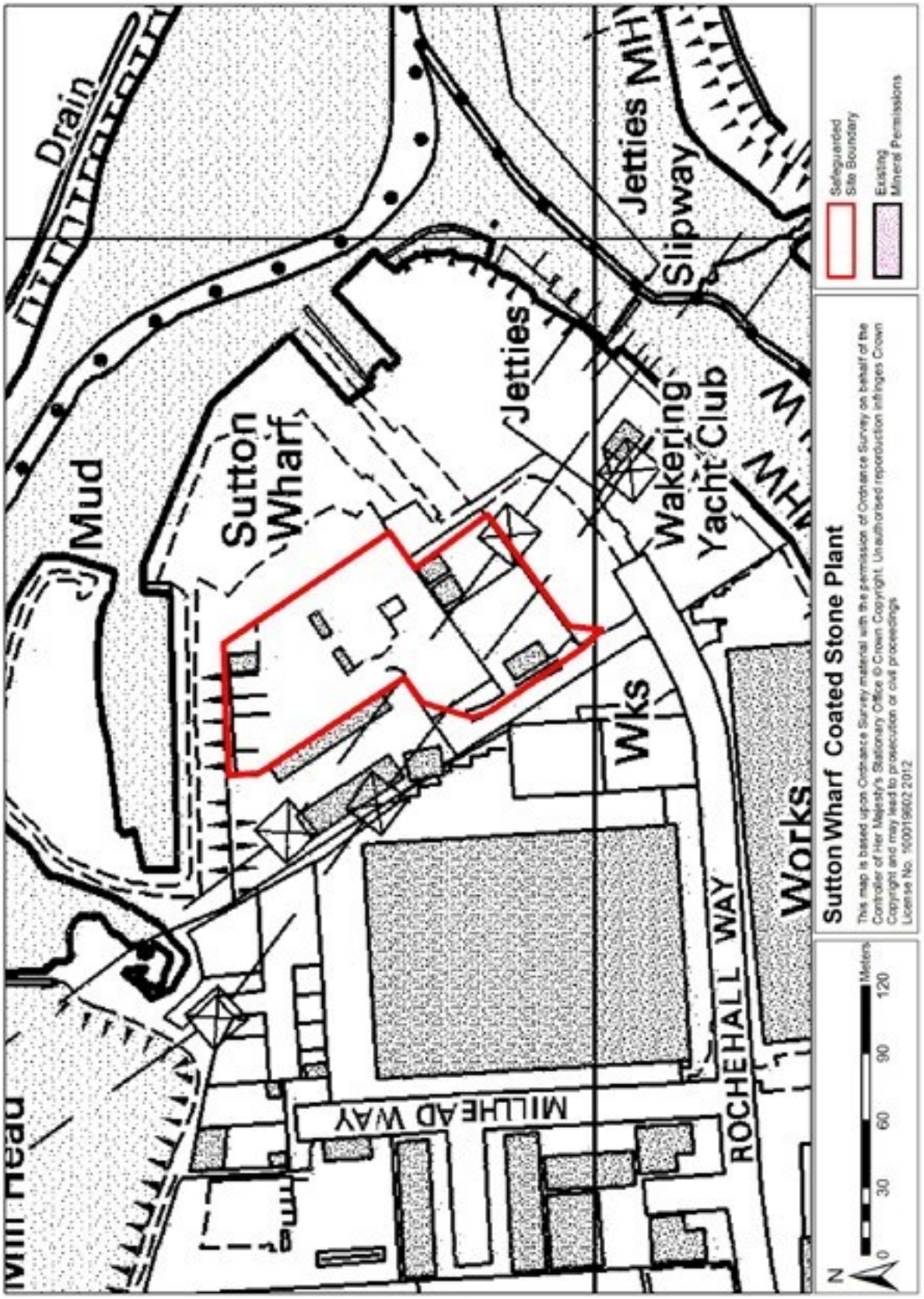
Sutton Wharf Coated Stone Plant

Site	Sutton Wharf Coated Stone Plant
Address	Sutton Wharf
District	Rochford
Area:	1.0 ha

Notes:

1. This site is safeguarded subject to planning permission (ref: F/0602/95/ROC) for the replacement of the asphalt (coated stone) plant at Sutton Wharf, Purdeys Way, as granted by Rochford District Council in 1996.

Sutton Wharf Coated Stone Plant



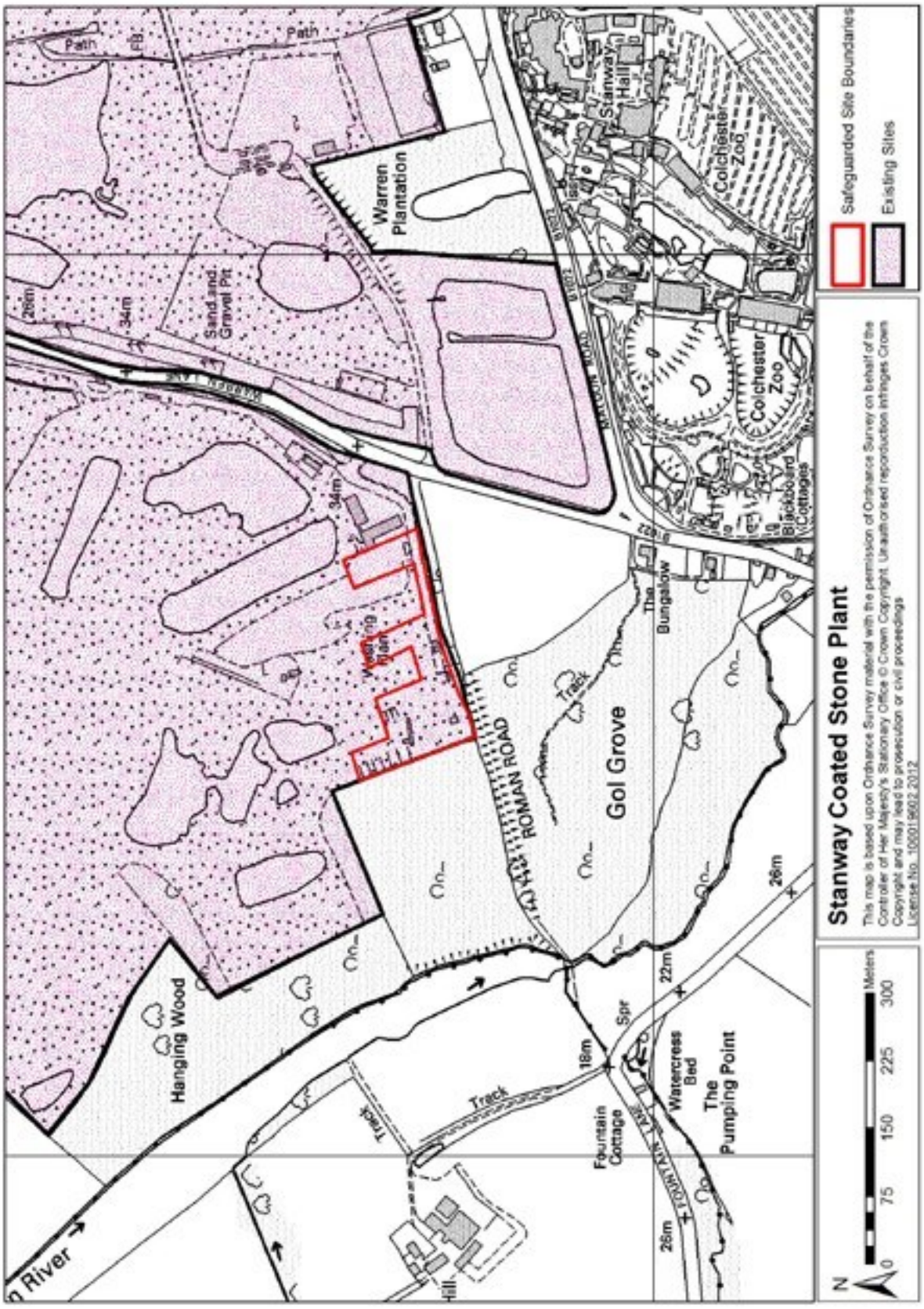
Stanway Coated Stone Plant

Site	Stanway Coated Stone Plant
Address	Warren Lane, Stanway
District	Colchester
Area:	1.6 ha

Notes:

1.The coated stone plant is operational and safeguarded subject to permission ref COL/1644/77.

2.The permission requires that the plant is demolished and removed from the site once the winning, working and processing of sand and gravel from Bellhouse Pit has been completed; at this time the safeguarding status will be withdrawn.



Stanway Coated Stone Plant

Wivenhoe Quarry Coated Stone Plant

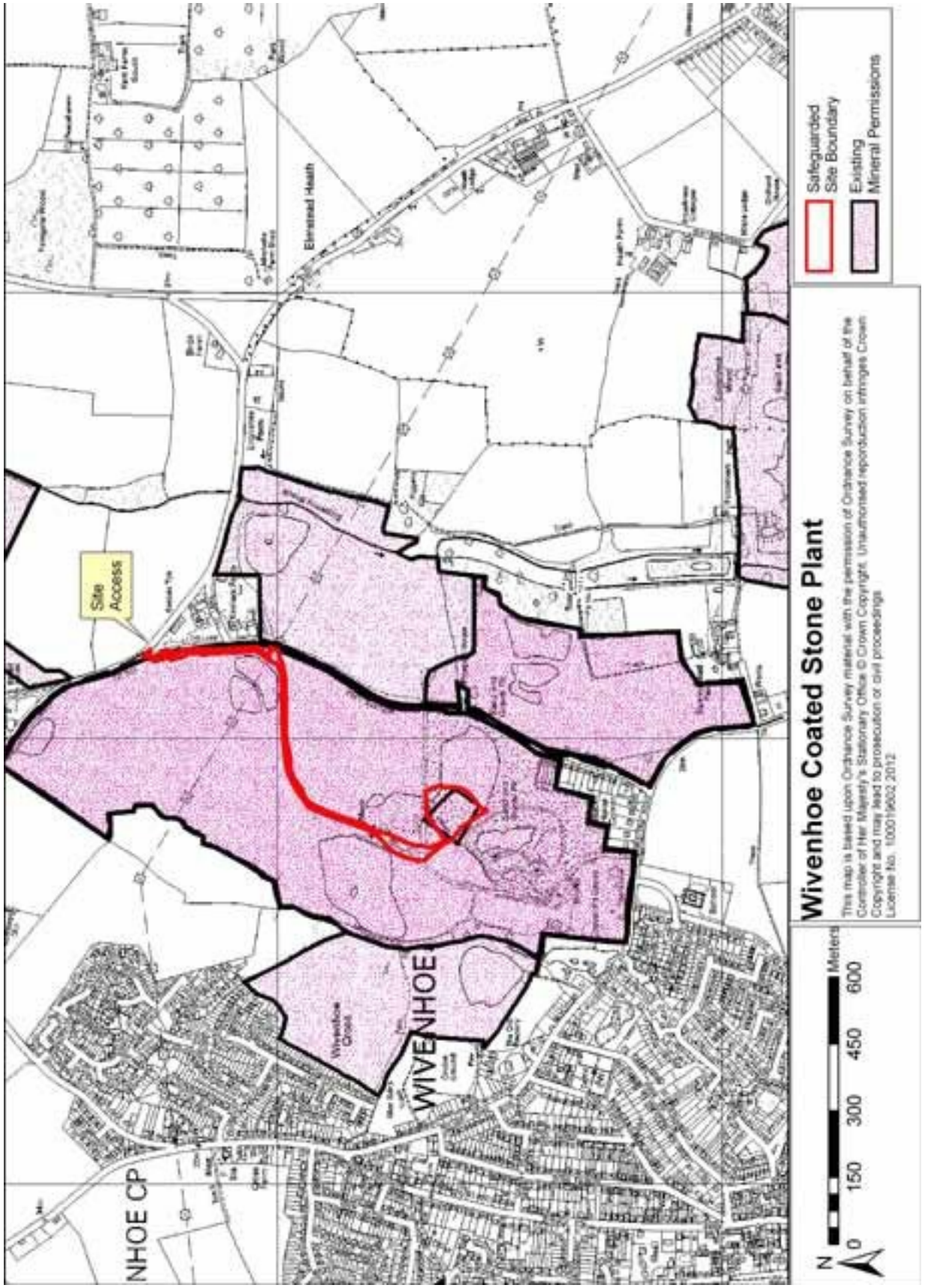
Site	Wivenhoe Quarry Coated Stone Plant
Address	Wivenhoe
District	Colchester
Area:	2.1 ha

Notes:

1. The coated stone plant is located within Wivenhoe Quarry and is safeguarded subject to planning permission (ref: ESS/42/12/TEN).

2. Safeguarded status will be withdrawn on expiry of the permission on 31 December 2015 unless a new application is granted for continuation of the temporary activity.

Wivenhoe Quarry Coated Stone Plant



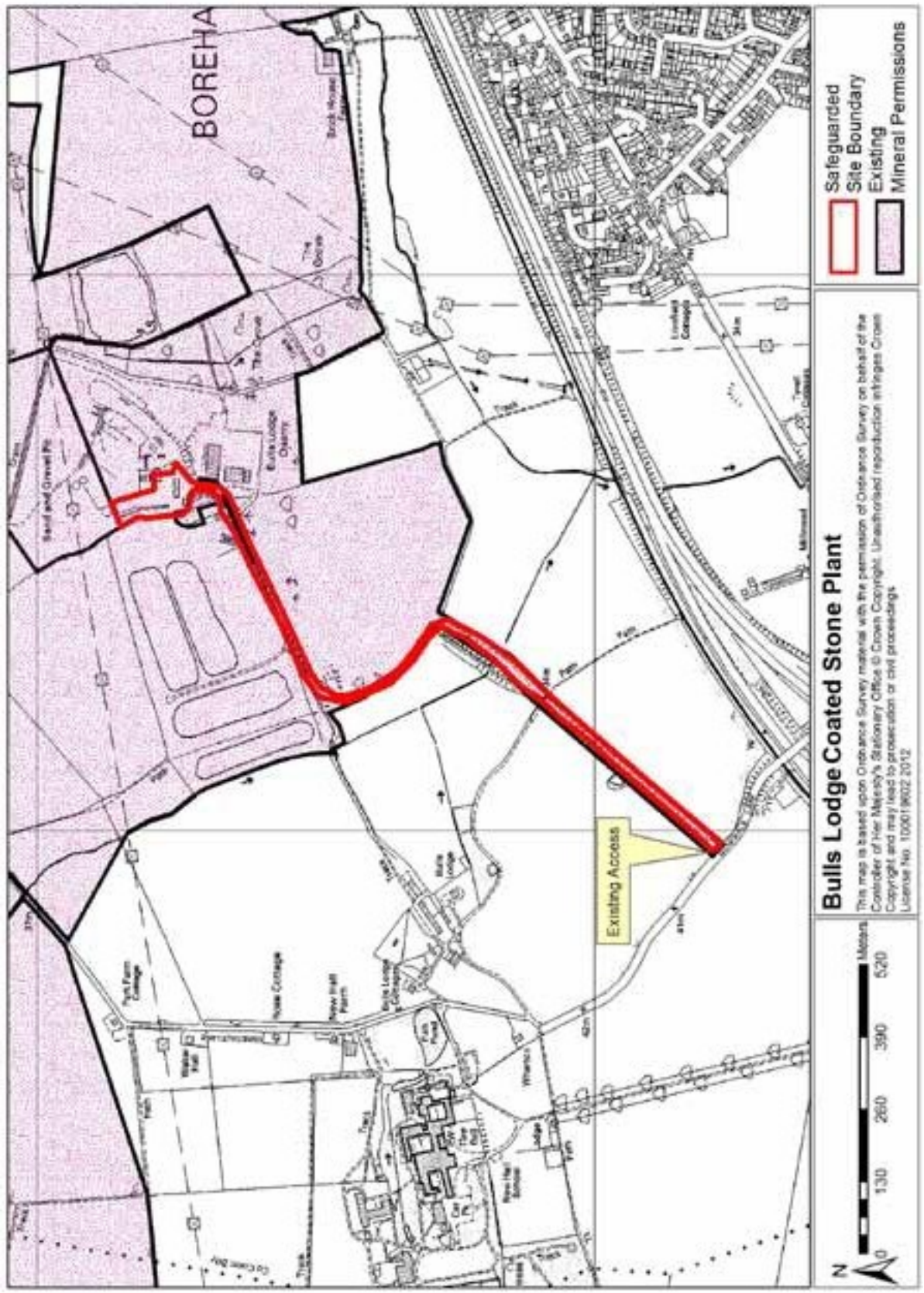
Bulls Lodge Quarry Coated Stone Plant

Site	Bulls Lodge Quarry Coated Stone Plant
Address	Bulls Lodge Quarry
District	Chelmsford
Area:	1.2 ha

Notes:

1. The coated stone plant is located within Bulls Lodge Quarry and is safeguarded subject to planning permission (ref: ESS/01/11/CHL). The planning permission expiry date is 31 December 2030, which is beyond the plan period.

Bulls Lodge Quarry Coated Stone Plant



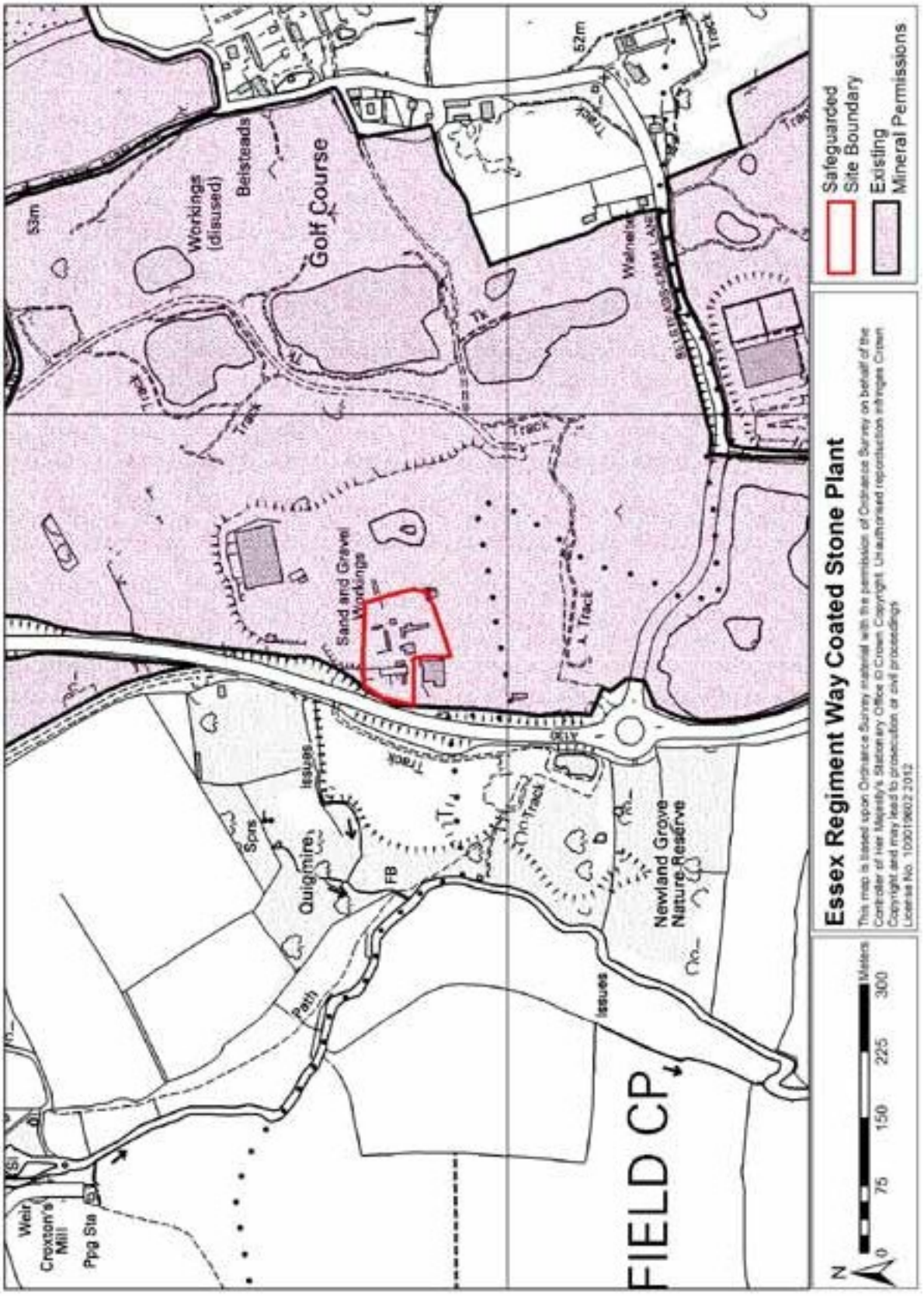
Essex Regiment Way Coated Stone Plant

Site	Essex Regiment Way Coated Stone Plant
Address	Essex Regiment Way (A130)
District	Chelmsford
Area:	0.85 ha

Notes:

1. The coated stone plant is safeguarded subject to planning permission (ref: 08/00372/FUL) for the retention of the existing urban coating plant in its current location within the Mid Essex Gravel site adjacent to Essex Regiment Way (A130), as granted by Chelmsford City Council in 2008.

Essex Regiment Way Coated Stone Plant



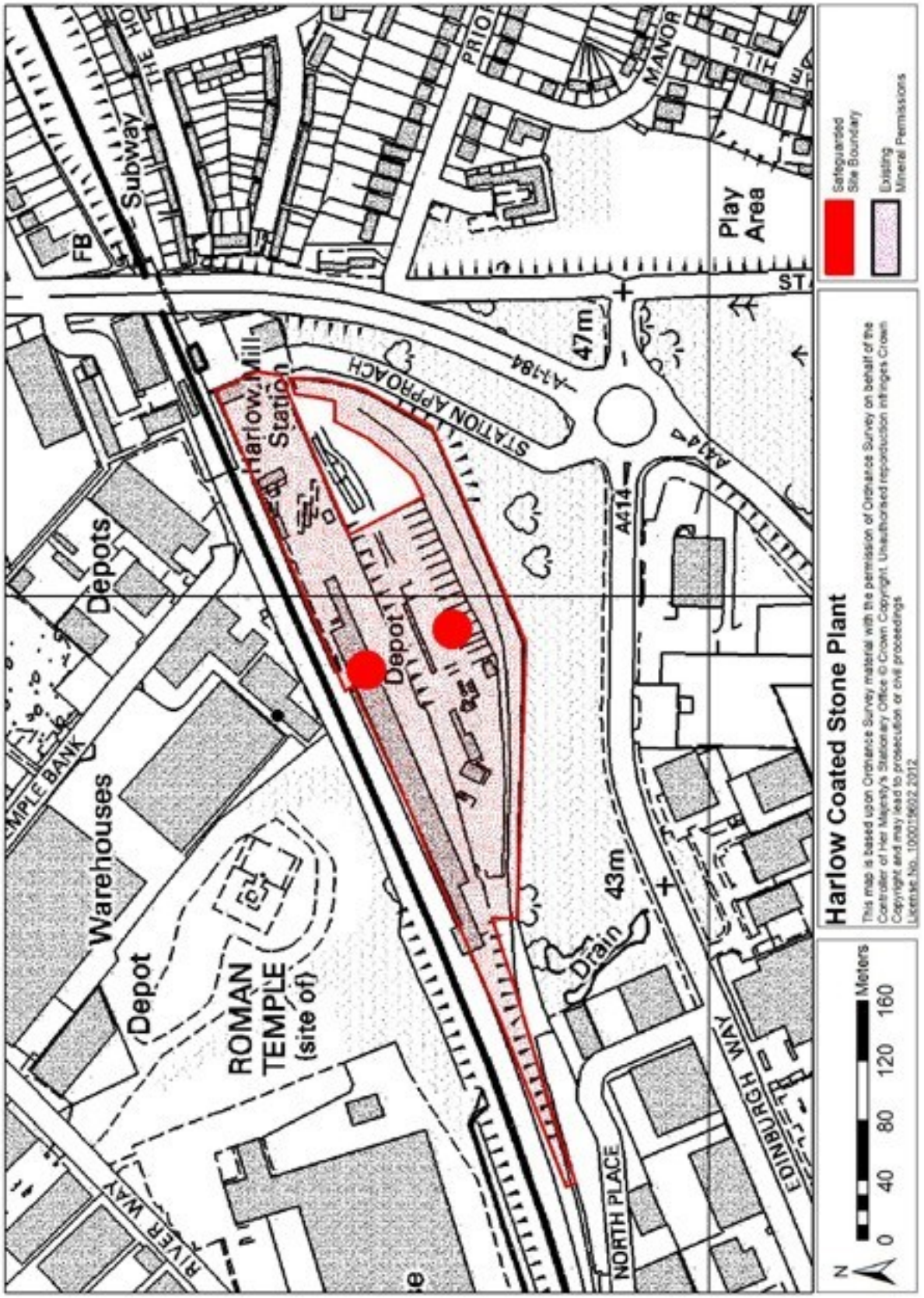
Harlow Rail Coated Stone Plant

Site	Harlow Rail Coated Stone Plant
Address	Harlow Mill Station
District	Harlow
Area:	1.9 ha

Notes:

1. The two coated roadstone plants are located in Harlow Mill Station, Harlow and are permanent facilities subject to planning permission (ref: ESS/05/11/HLW and ESS/23/08/HLW).

Harlow Rail Coated Stone Plant



Appendix Five. Consultation Procedure for Mineral Safeguarding Areas

In accordance with Policy S8 of the Plan, the Essex district/ borough/ city councils (as a Local Planning Authority) should consult the Minerals Planning Authority (Essex County Council) on planning applications situated within Mineral Safeguarding Areas (MSAs) and Mineral Consultation Areas (MCAs) to ensure that specific mineral resources are not needlessly sterilised by future development.

However, some limitation and filtering needs to operate within the consultation process as it is neither practicable nor necessary for the Minerals Planning Authority to be consulted on all developments proposed in planning applications or being considered during Local Plan preparation. The following development below will be excluded from the consultation process.

A. Scale of Development Area

The Mineral Planning Authority will consider prior extraction in MSAs as a windfall before alternative development occurs on sites greater than:

- Five hectares for sand and gravel
- Three hectares for chalk
- Greater than a single residential curtilage for brickearth and brick clay

Therefore, there is no requirement for Essex district/ borough/ city councils (as a Local Planning Authority) to consult the Minerals Planning Authority in respect of proposed development where the development area for the relevant kind of mineral is less than these size thresholds.

B. Types of Proposed Development

The table shows which types of proposed development will be excluded from or included in the MSA and MCA consultation arrangements.

Table 9. Types of proposed development

Development	MSA	MCA [9]
Applications for development on land which is already allocated in adopted local development plan documents.	Excluded	Excluded
Proposals for minor infilling of development within the defined settlement limits for towns, villages and hamlets identified in adopted local development plan documents.	Excluded	Included
Applications for minor householder development including; • Construction of a replacement dwelling where the new dwelling occupies the same or similar footprint to the building being replaced; • Minor extensions to existing dwellings or properties where they lie within the immediate curtilage and would not bring the building within 250m of the boundary of an existing or approved minerals development; • Proposals for the provision of incidental and non-habitable structures lying within the curtilage of an existing dwelling (such as driveways, garages, car parks and hard standing).	Excluded	Excluded
Proposals for the erection of agricultural buildings immediately adjacent to an existing working farmstead.	Excluded	Included

(9) N.B. The MPA would wish to be consulted on any planning application for development on an existing minerals development, Preferred or Reserve Site

Development	MSA	MCA [9]
Applications for change of use	Excluded (where it does not involve a building or engineering works)	Included
Applications for temporary buildings, structures or uses (for up to five years)	Excluded	Excluded (unless for residential or employment uses)
Applications related to existing permissions such as for reserved matters, or for minor amendments to current permissions.	Excluded	Included
Applications for other kinds of consent – advertisements; listed building consent; Conservation Area consent and proposals for work to trees or removal of hedgerows.	Excluded	Excluded
Proposals for the demolition of a residential or other building.	Excluded	Excluded
Proposals for minor works such as fencing or bus shelters.	Excluded	Excluded
Proposal for any extension of and/or change to the curtilage of a property	Excluded	Excluded

(9) N.B. The MPA would wish to be consulted on any planning application for development on an existing minerals development, Preferred or Reserve Site

N

Colchester

Harlow

Chelmsford

Basildon

Policies Map

Minerals Consultation area

Coated Stone Plant

Strategic Recycling Site

Transhipment

Existing Sites (Extraction)

Scheduled Monuments

16

0 4,050 8,100

sateguenllng

,200 24300 32,400

Meters

recycle for Essex

Essex County Council